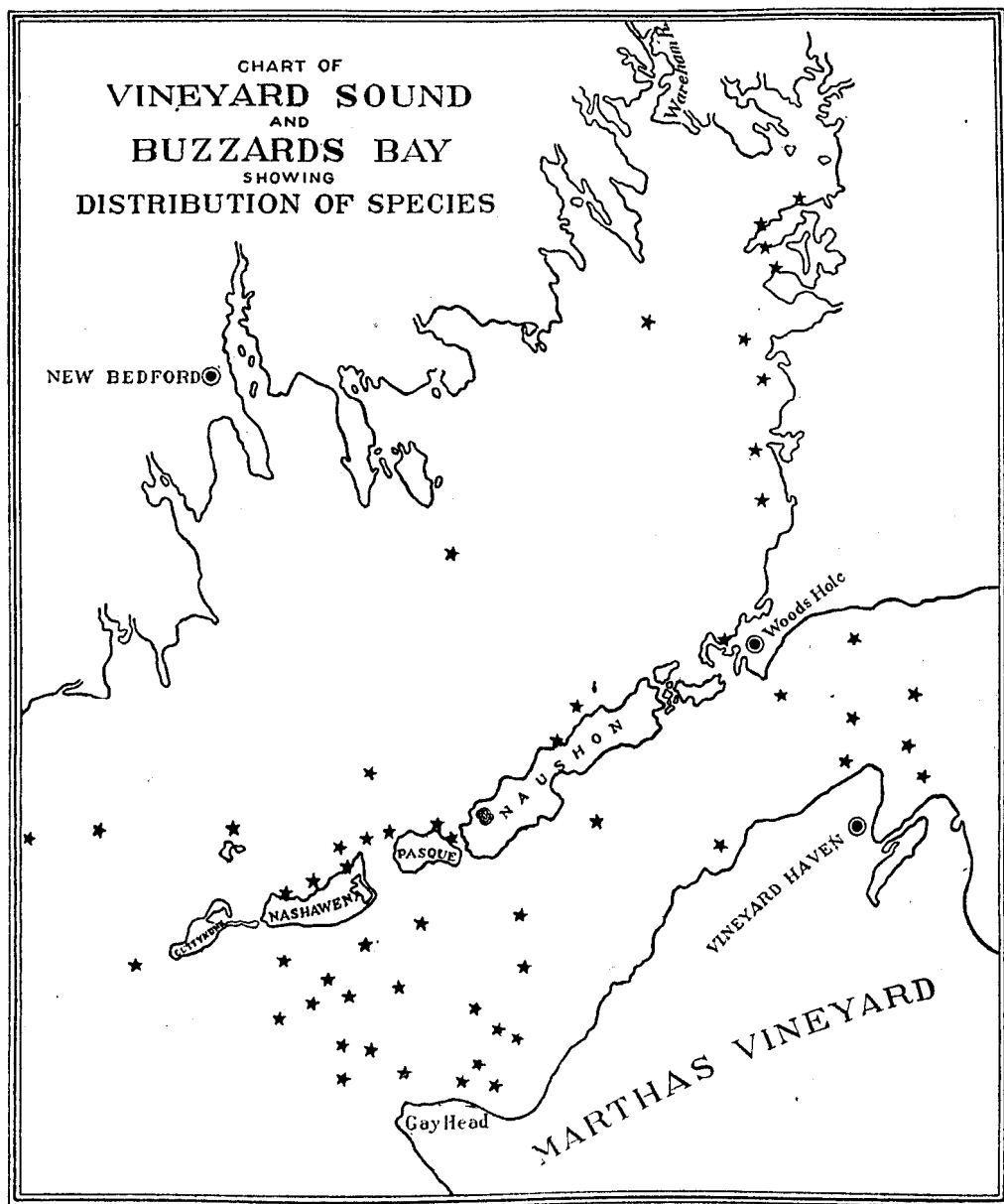
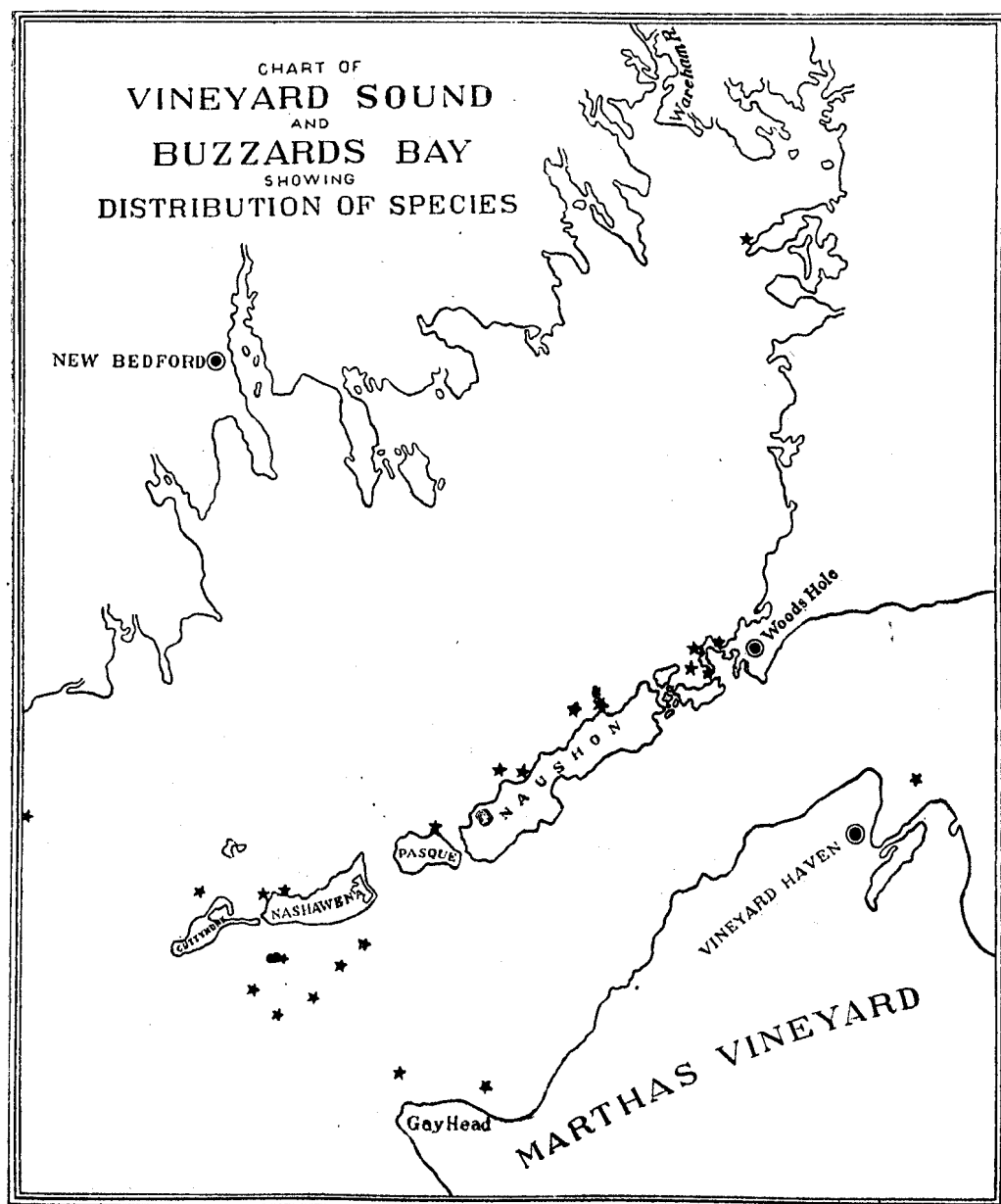
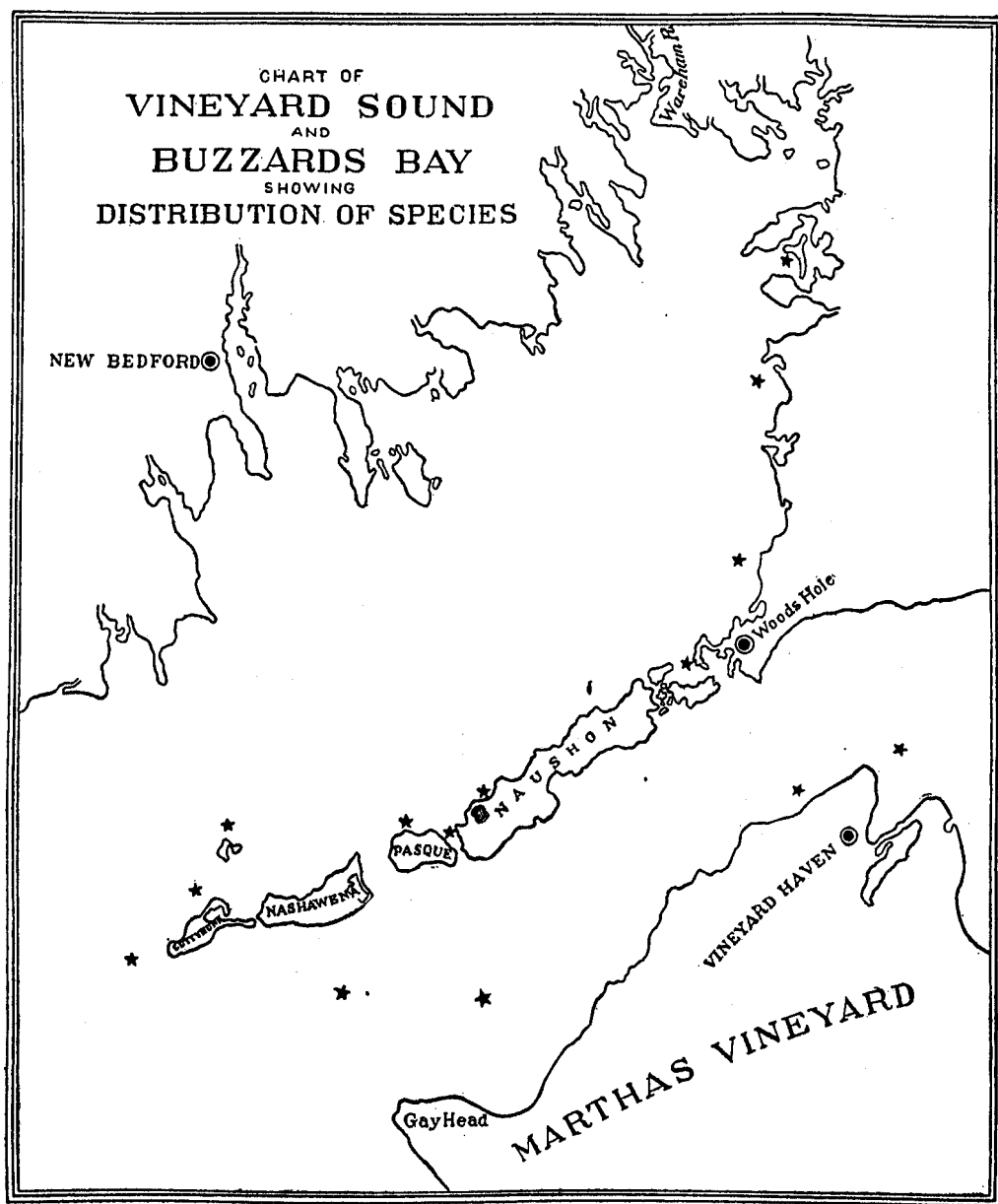
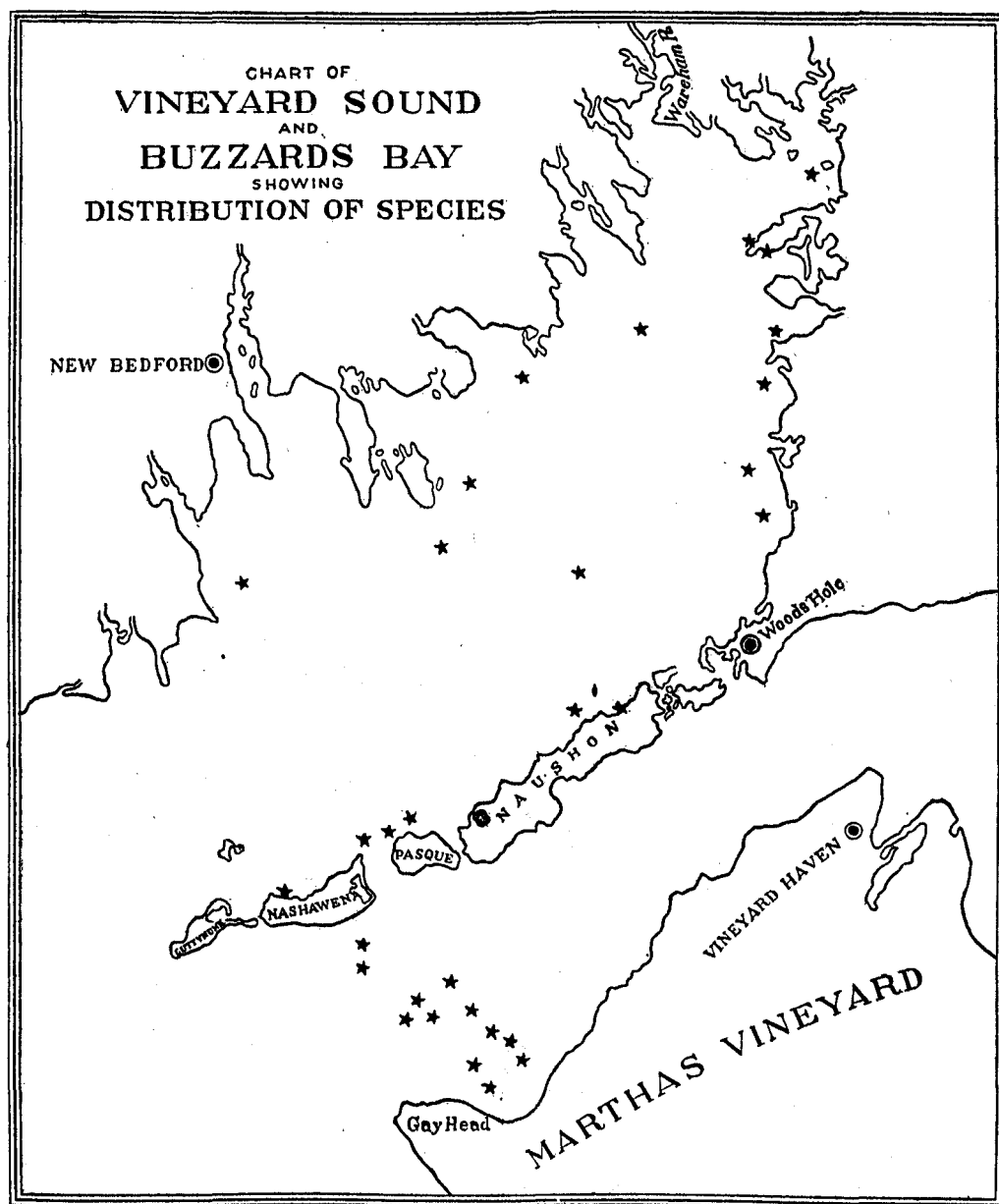
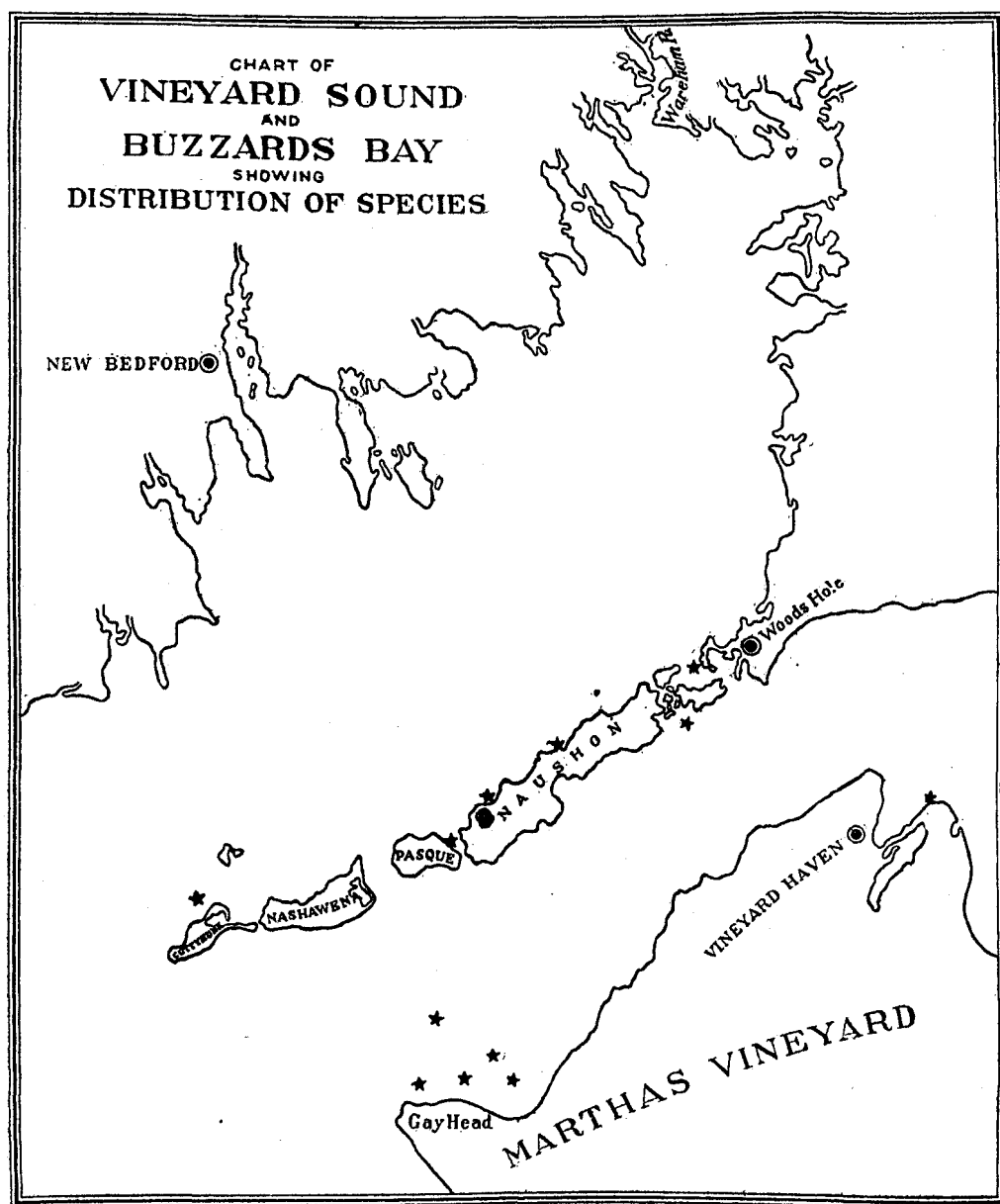
CHART 1.—*Biloculina ringens*.

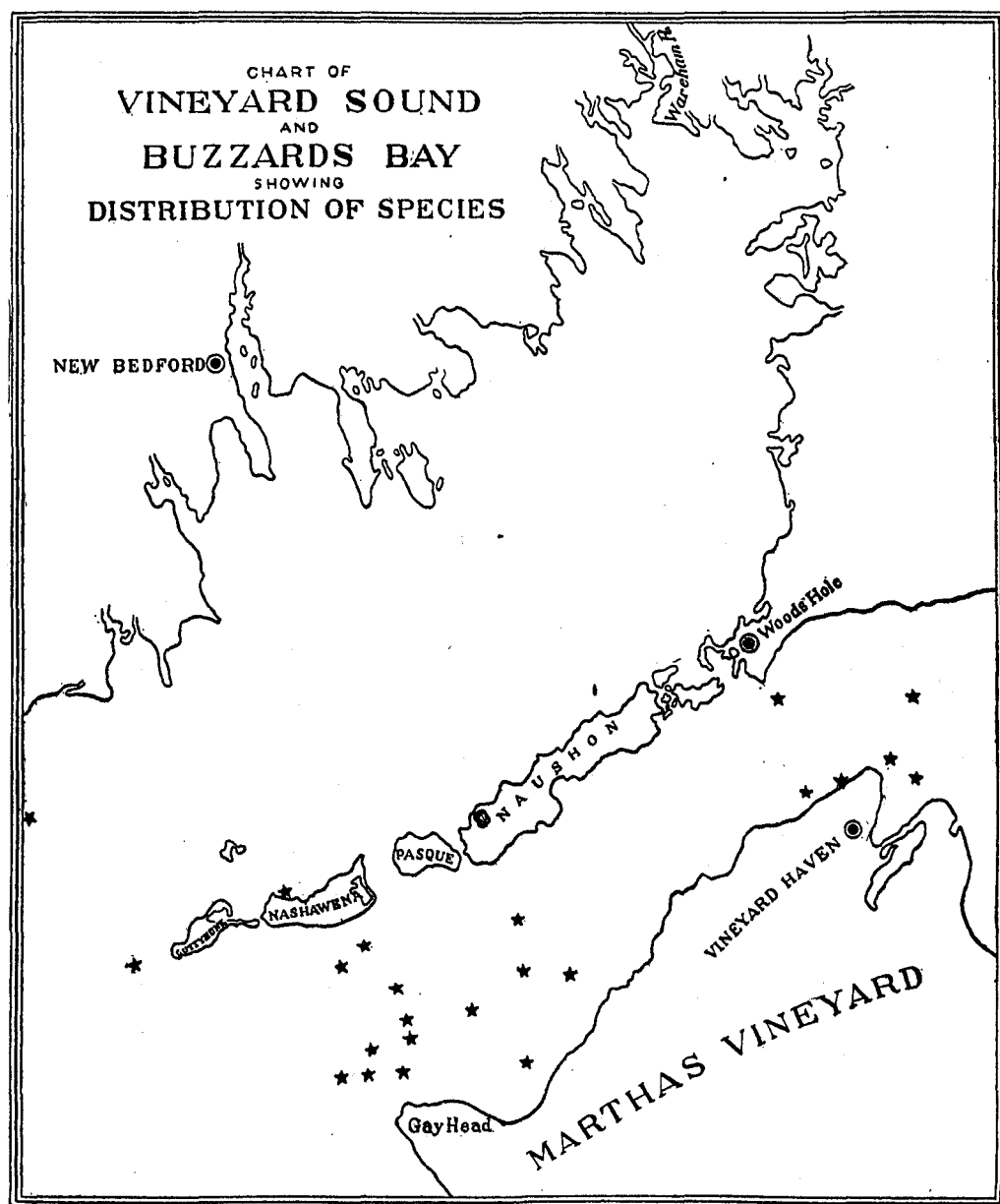
CHART 2.—*Miliolina seminulum*.

CHART 3.—*Miliolina oblonga*.

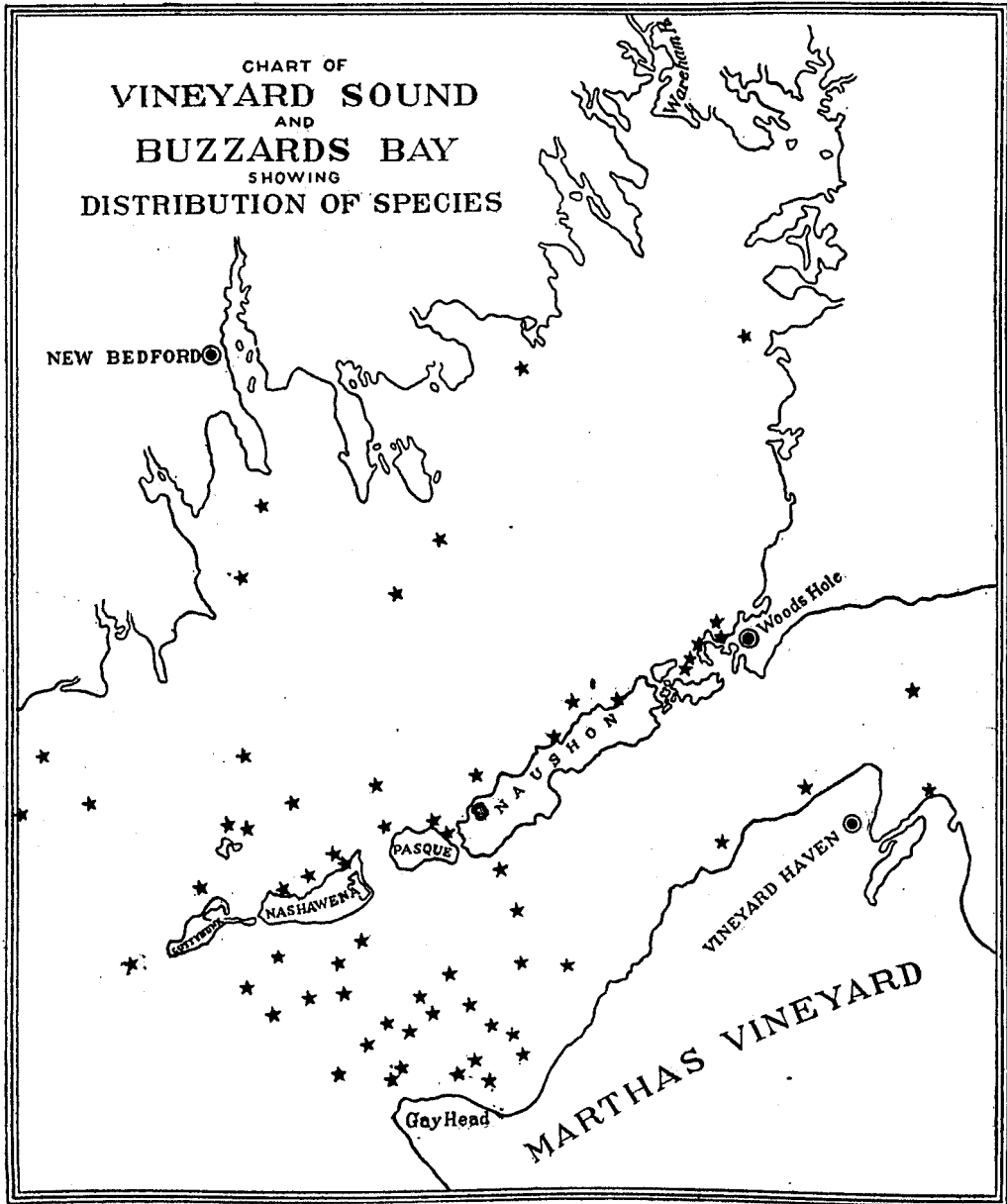
CHART 4.—*Miliolina circularis*.

CHART 5.—*Polymorphina lactea*.

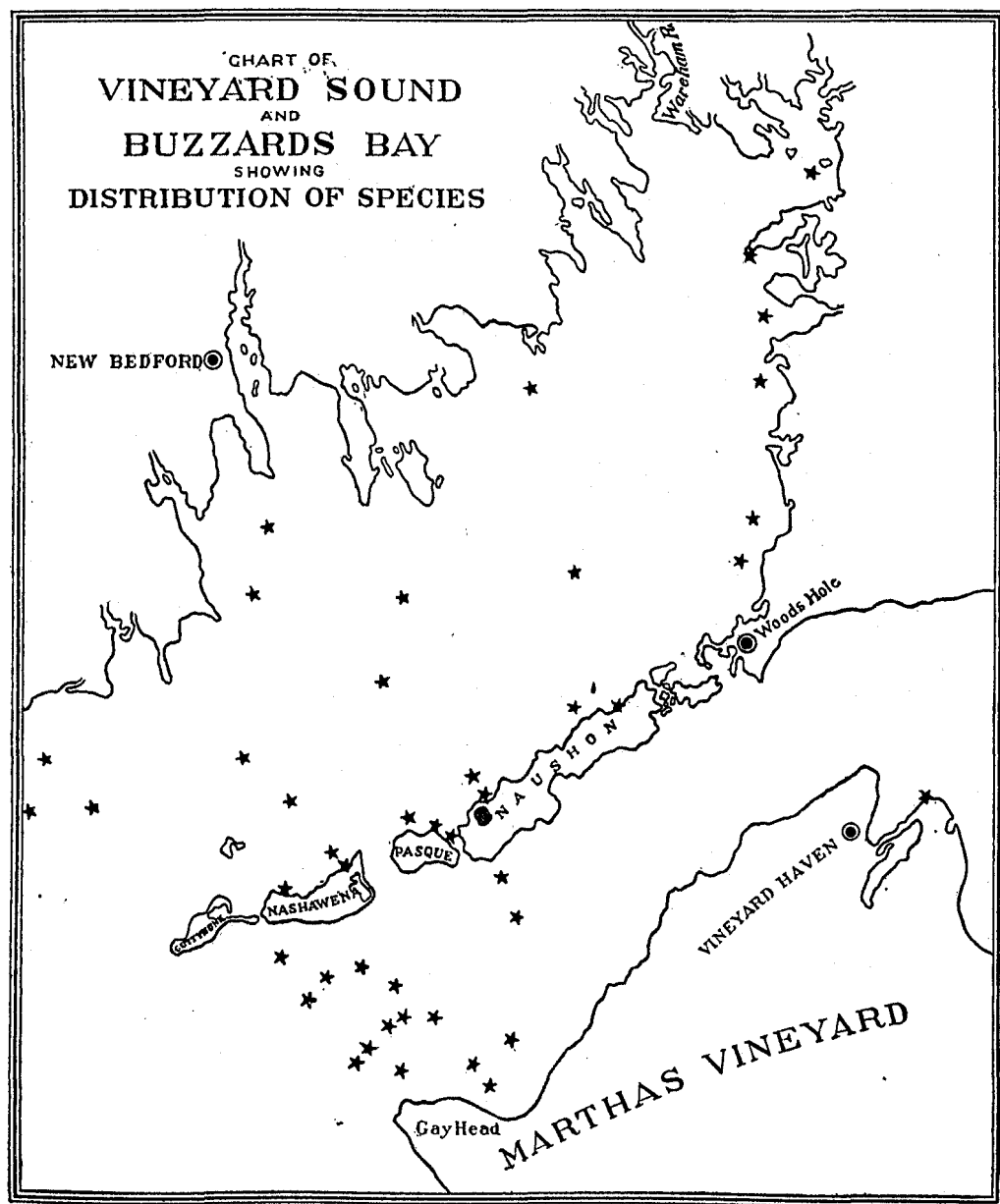
CHART 6.—*Discorbina rosacea*.

CHART 7.—*Pulvinulina lateralis*.

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CHART 8.—*Rotalia beccarii*.



CHART 9.—*Polystomella striatopunctata*.

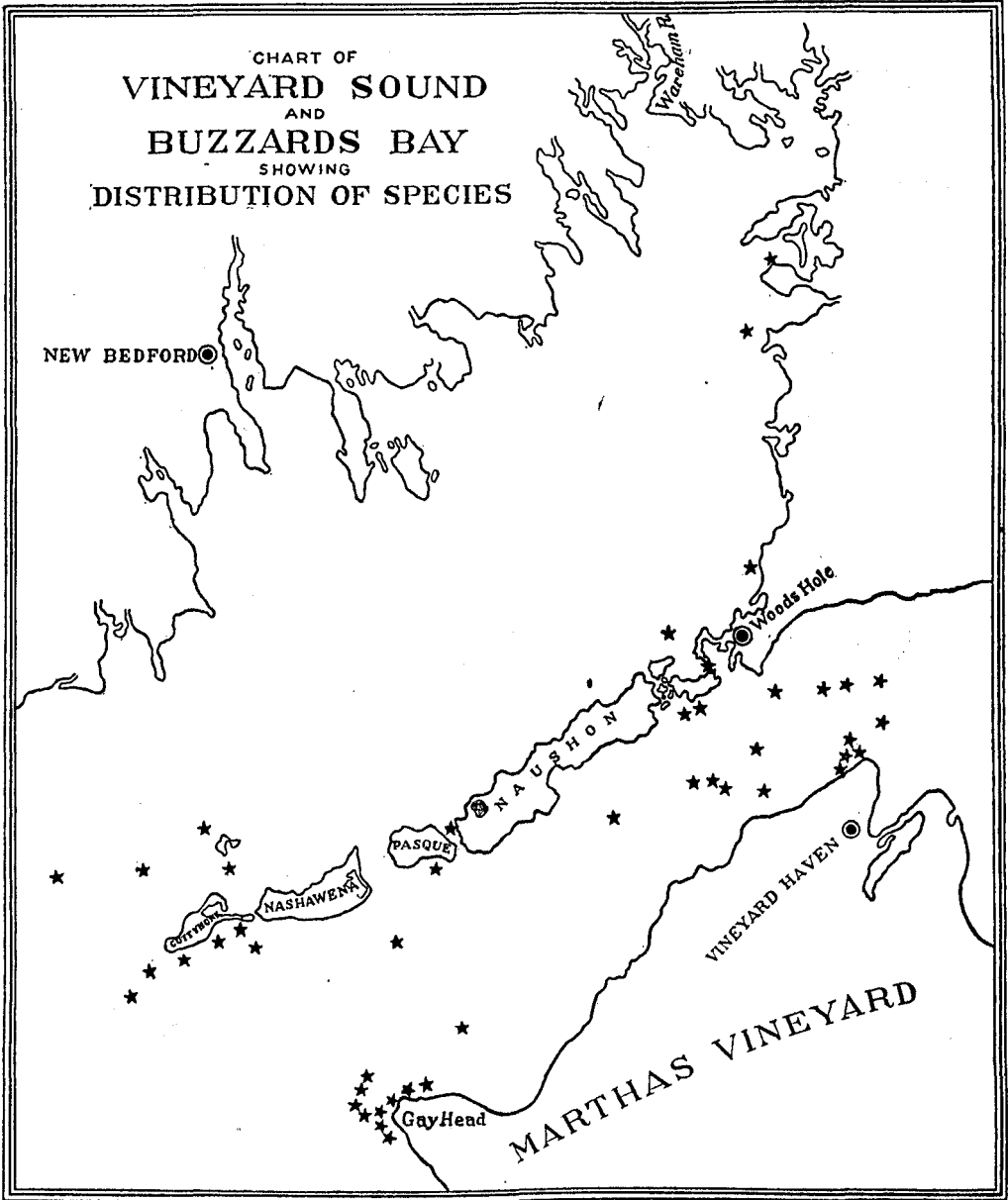
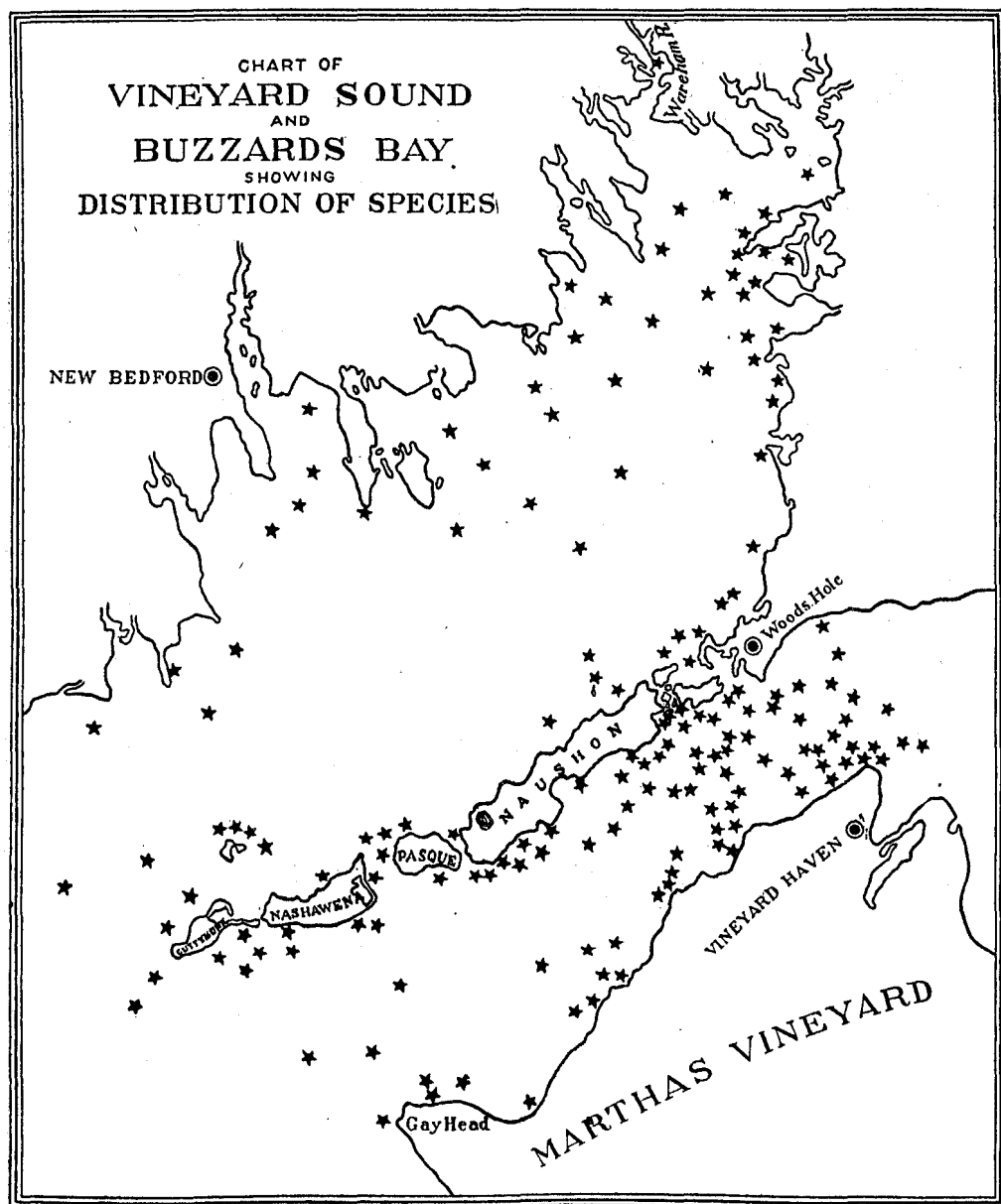
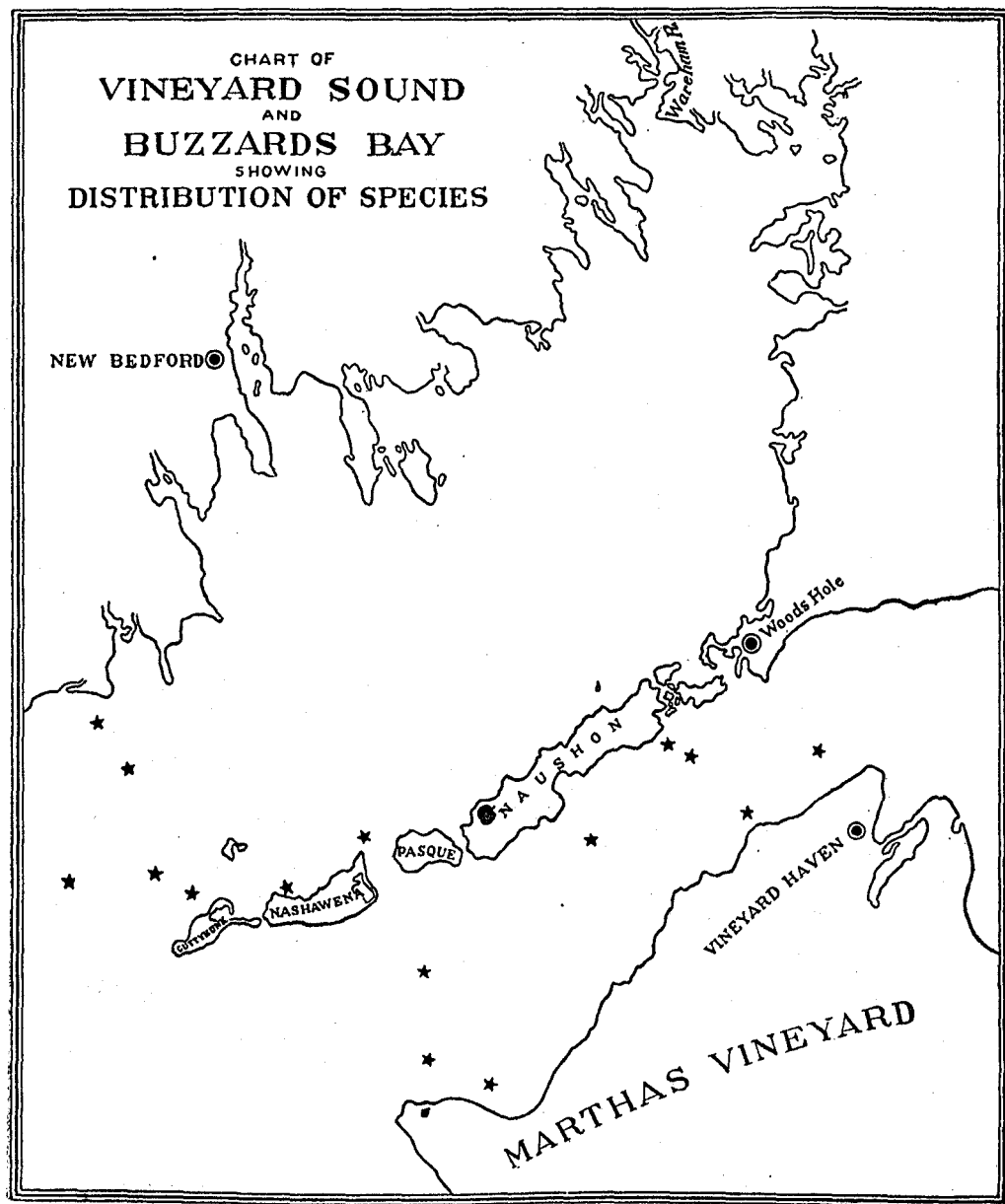


CHART 10.—*Grantia ciliata*?

CHART II.—*Cliona celata*.

CHART 12.—*Chalina* sp.

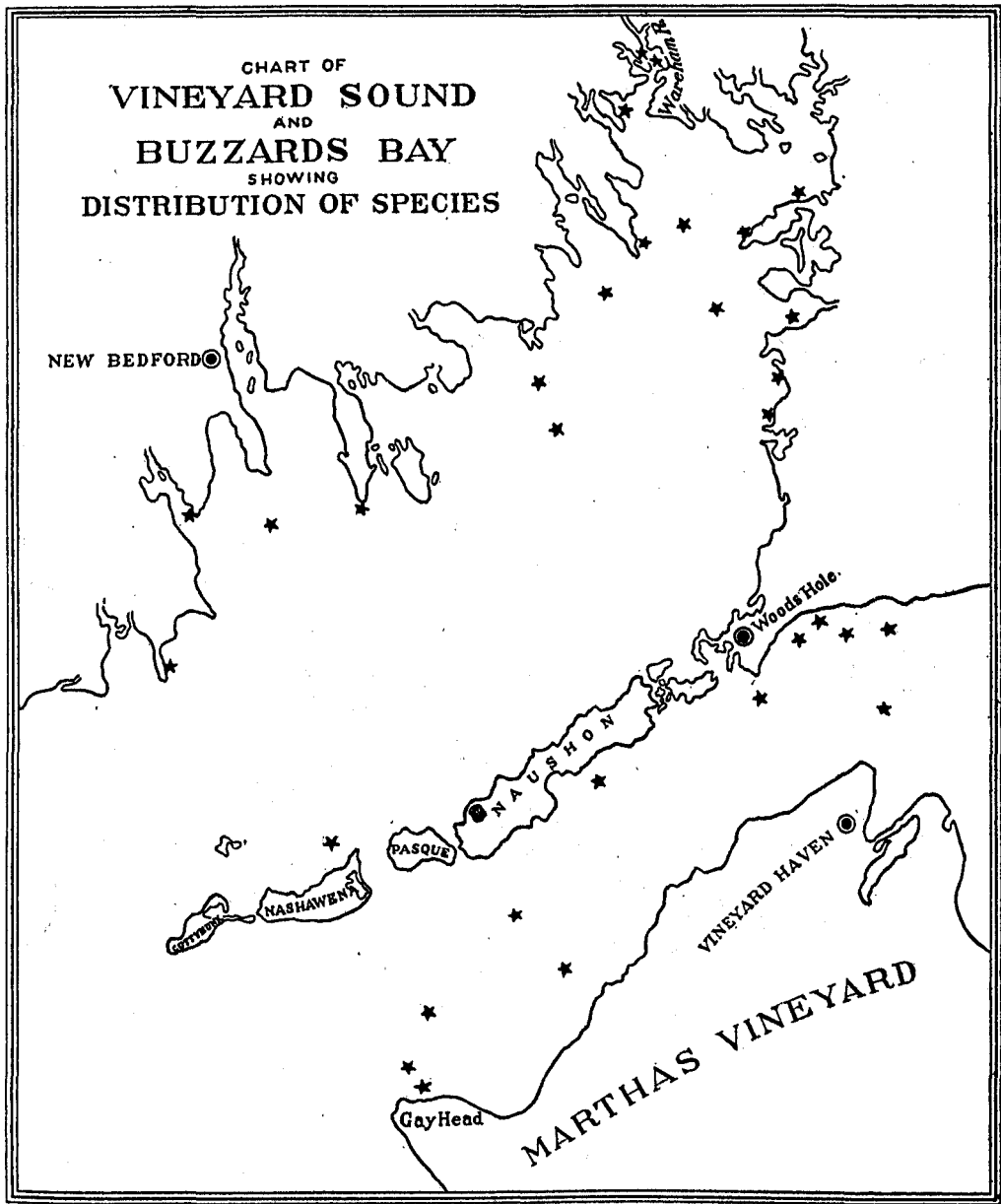
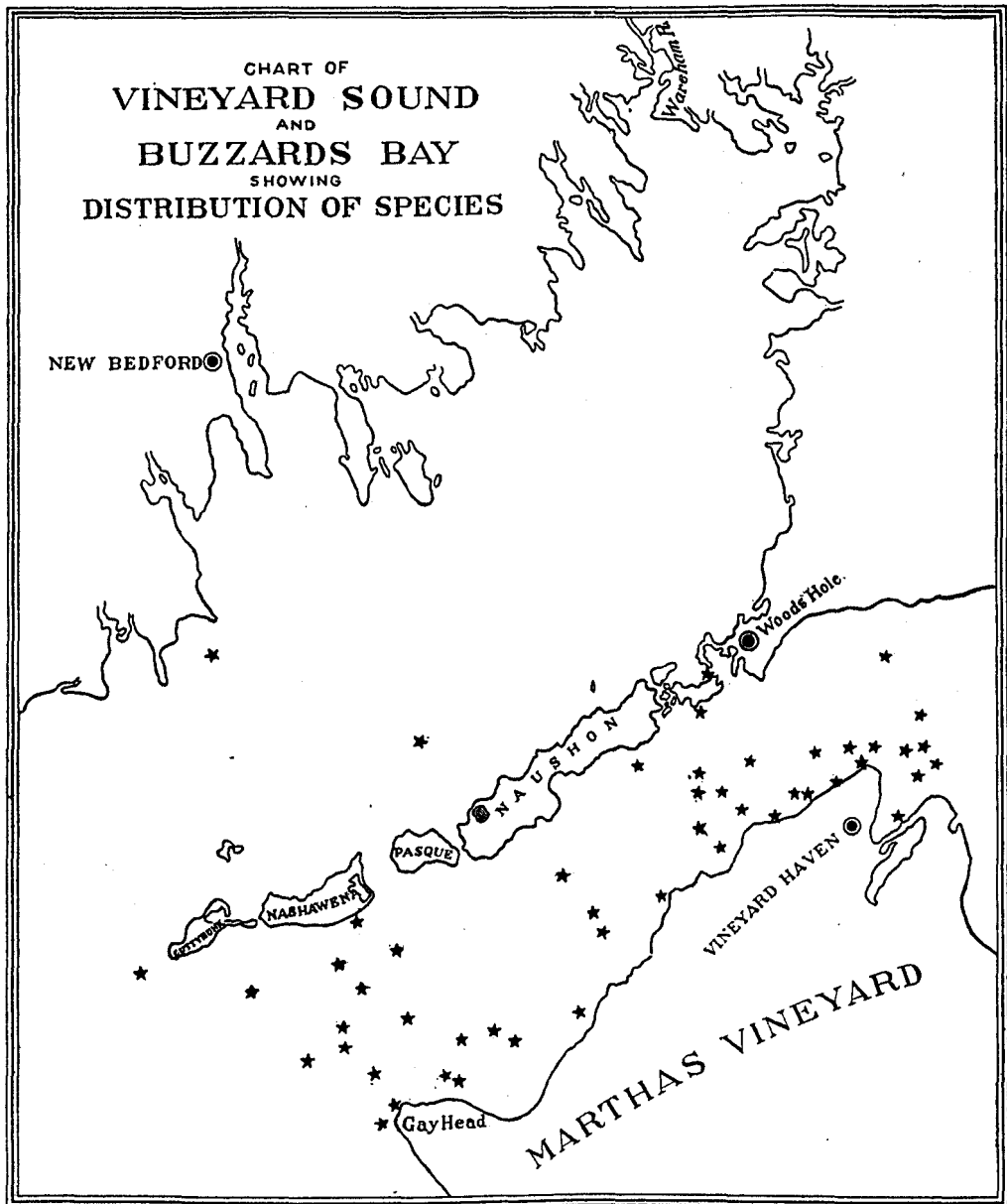
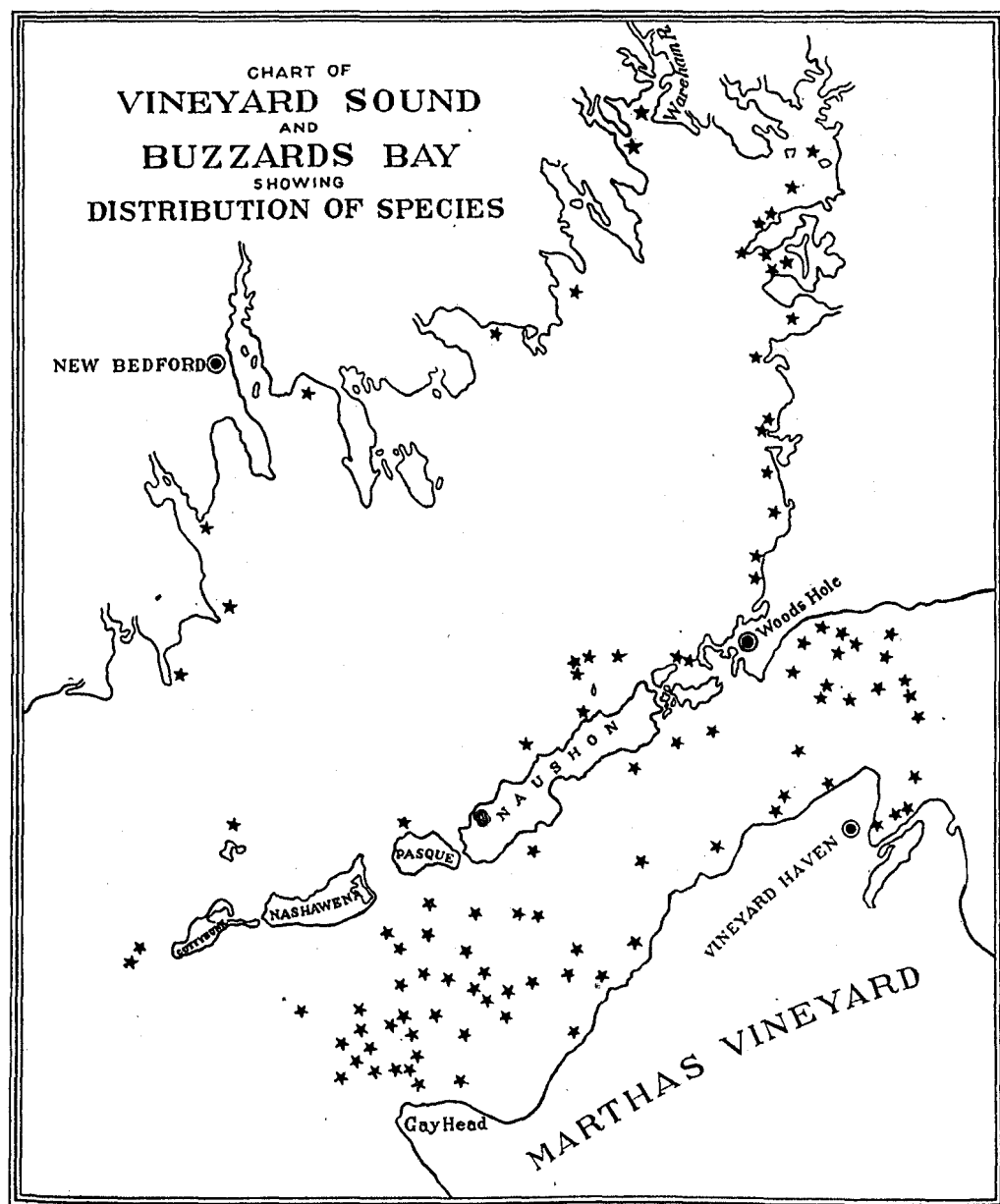
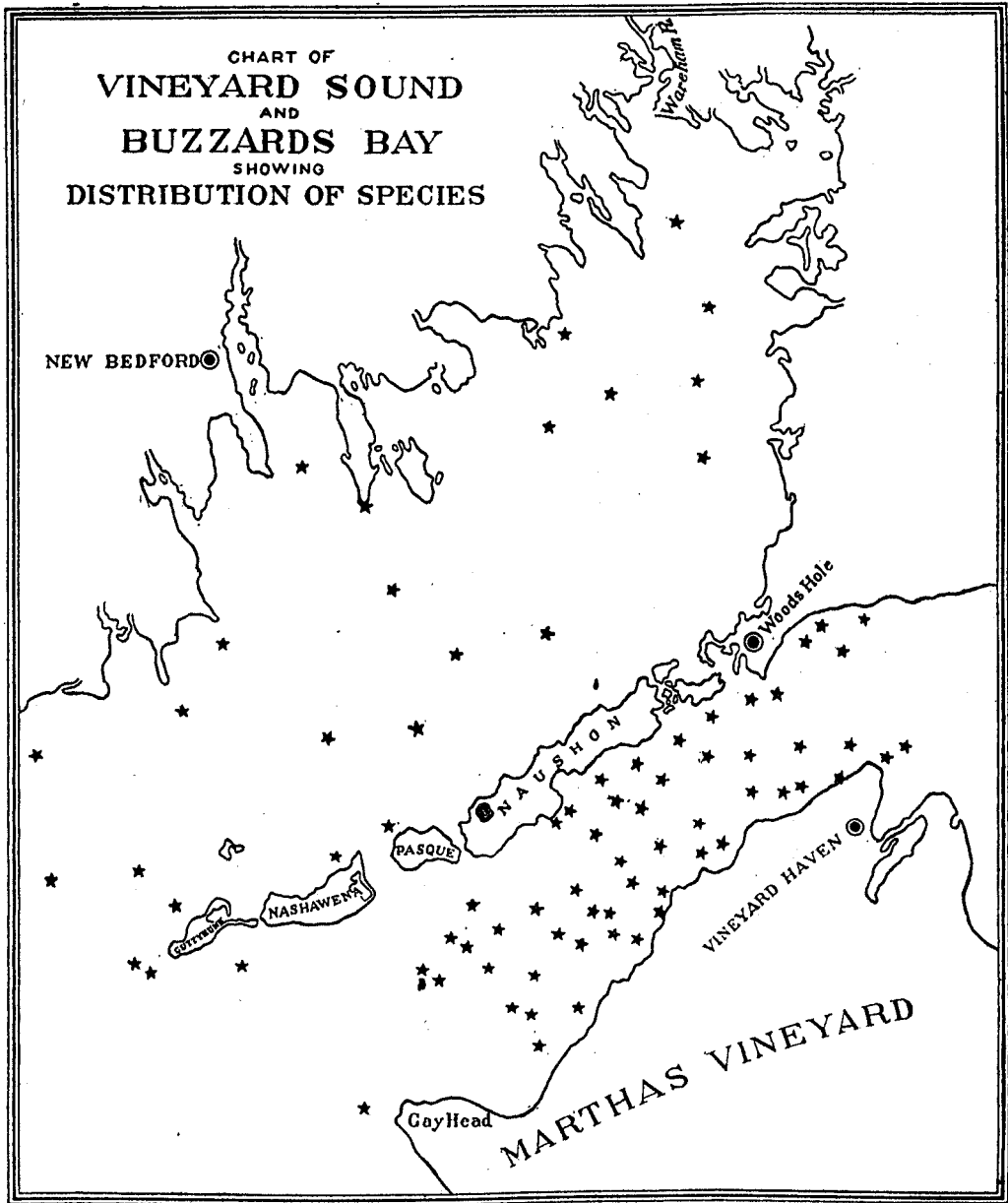


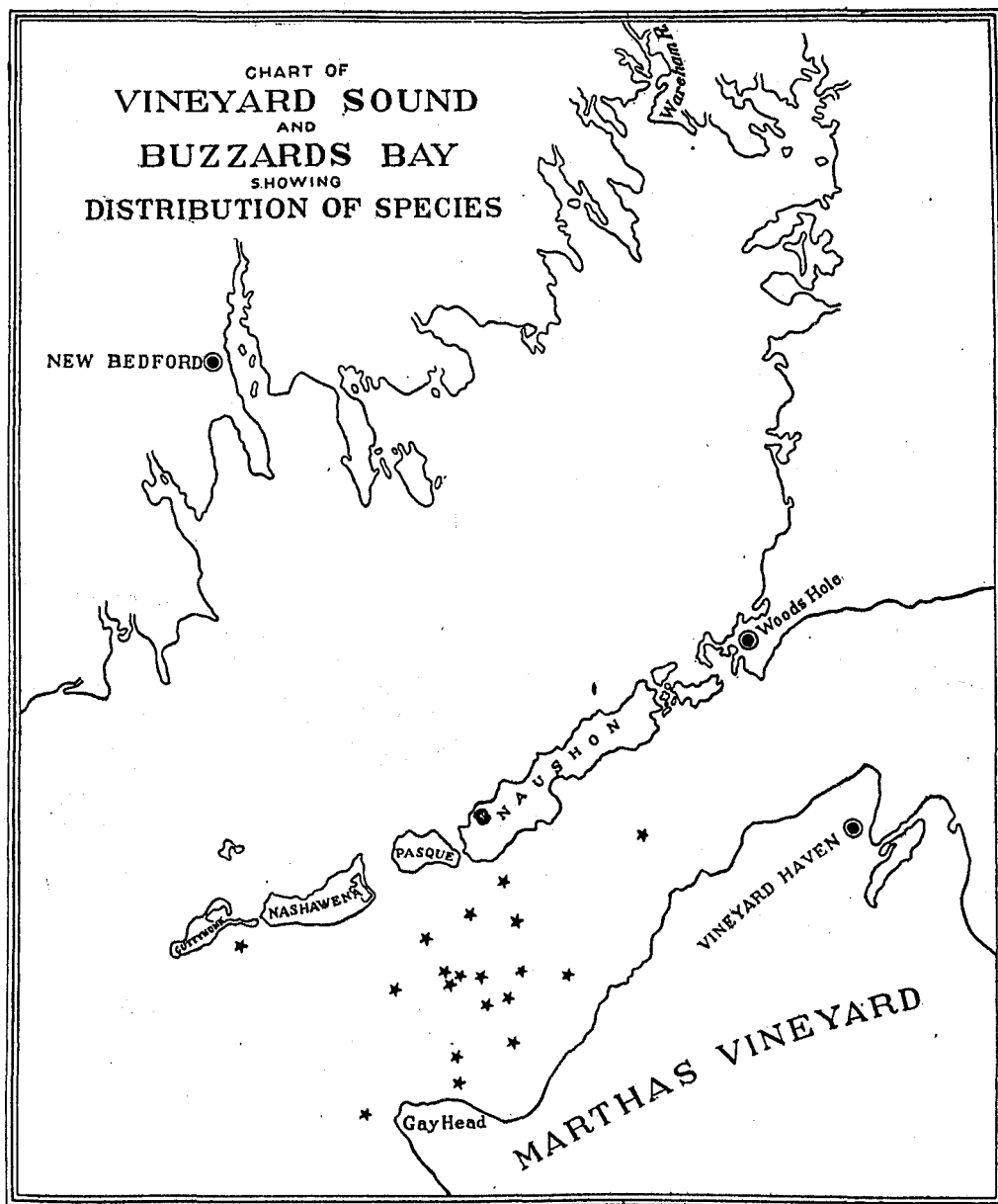
CHART 13.—*Microciona prolifera*.

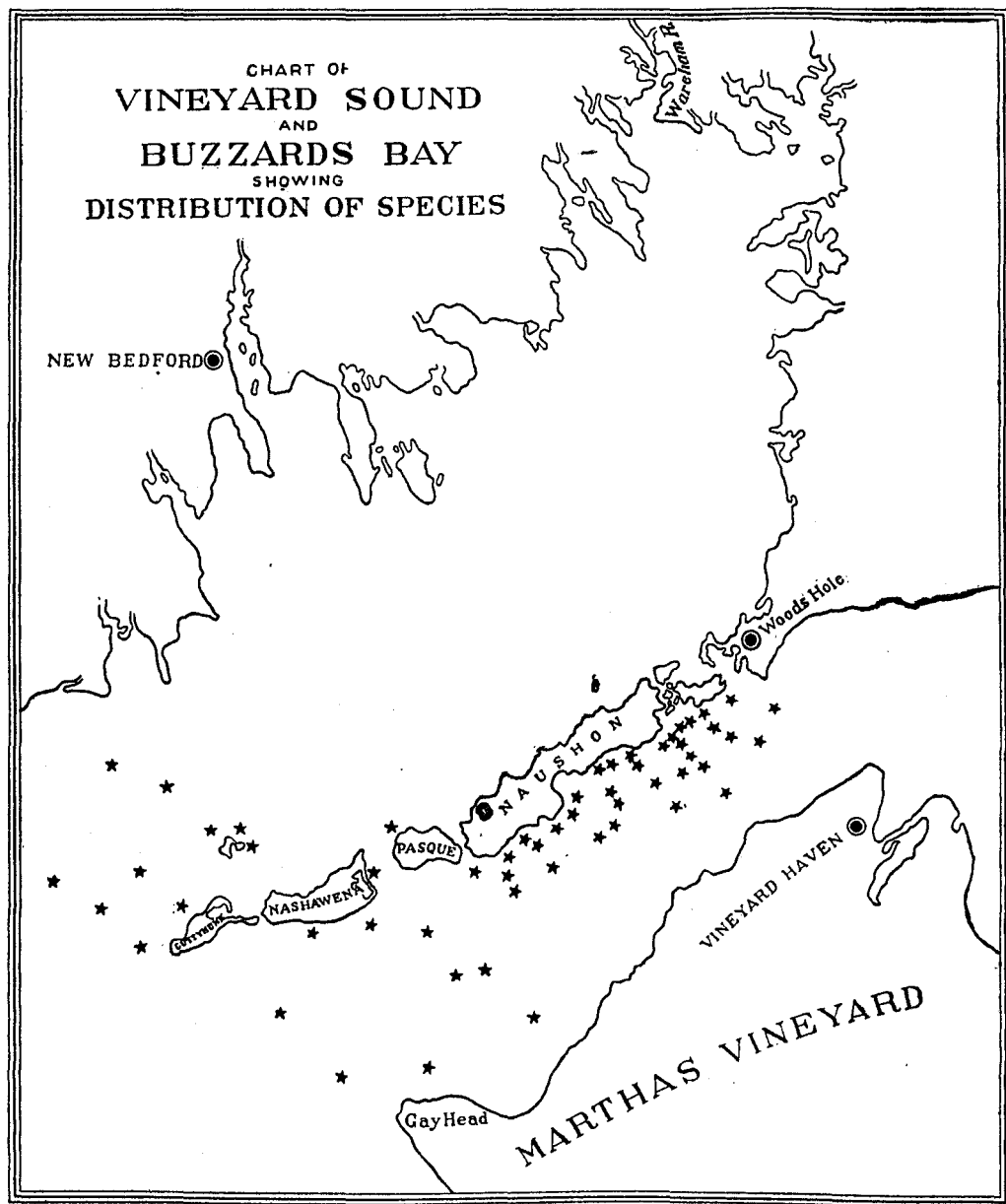
CHART 14.—*Pennaria tiarella*.

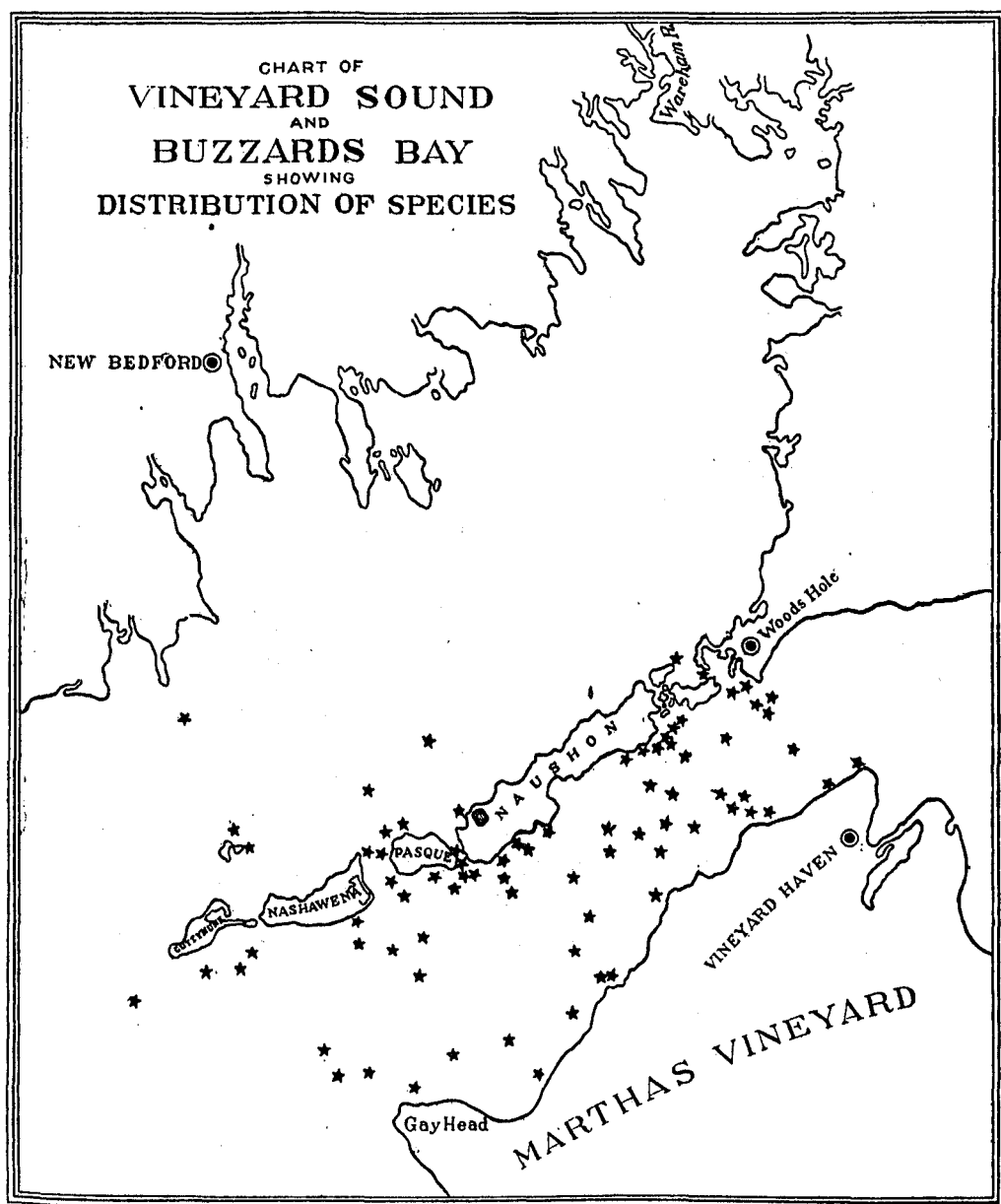
CHART 15.—*Hydractinia echinata*.

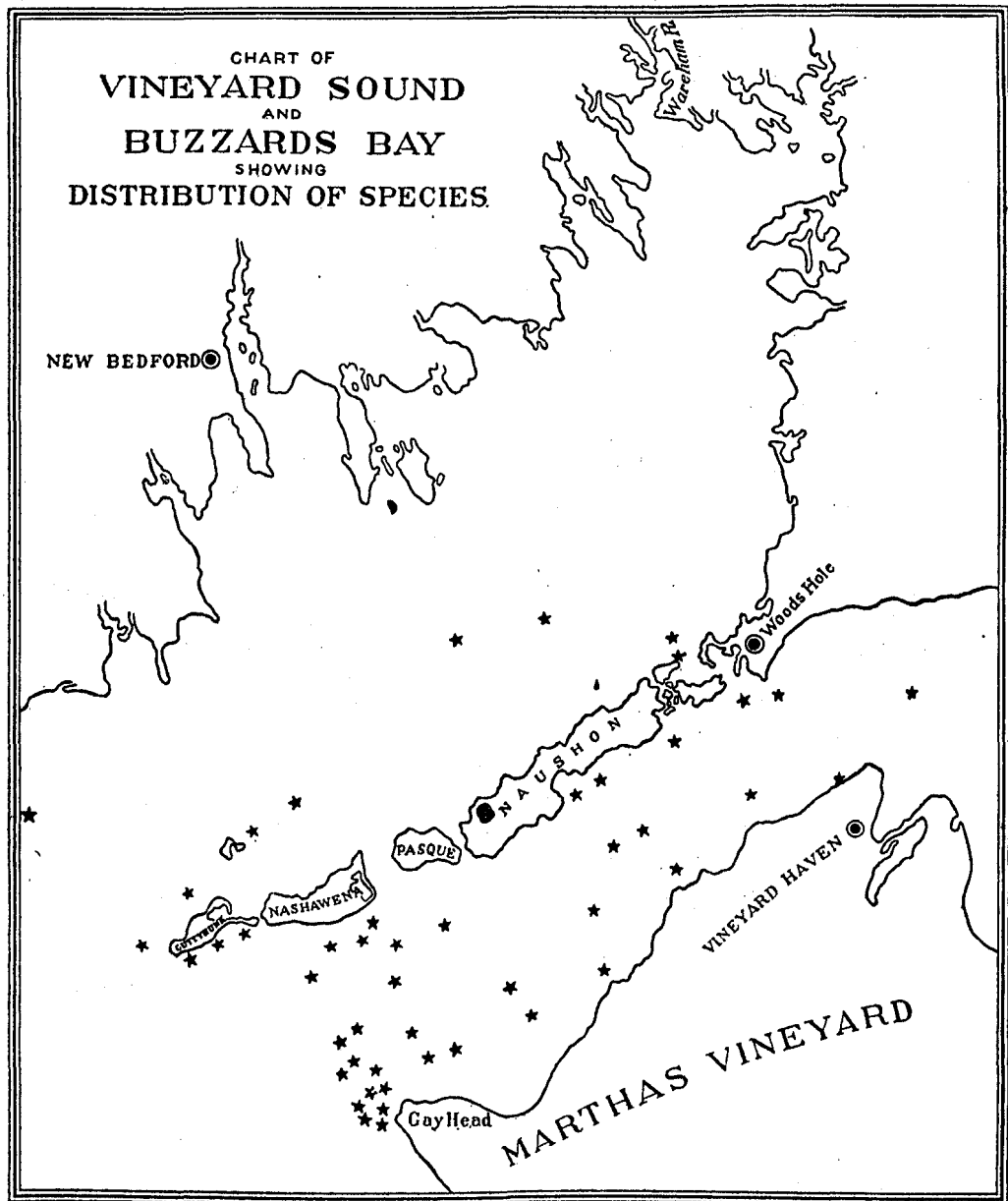
CHART 16.—*Eudendrium ramosum*.

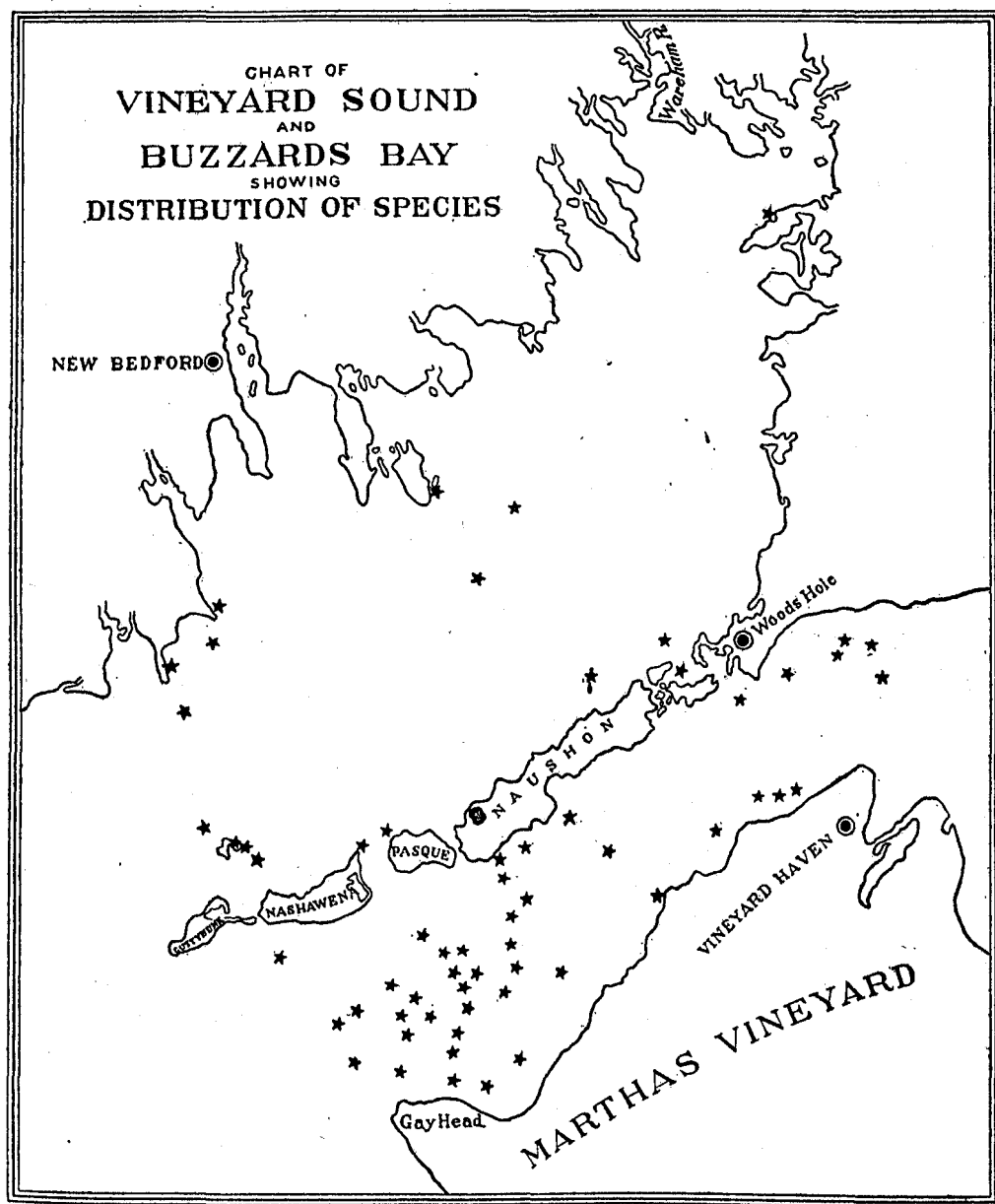


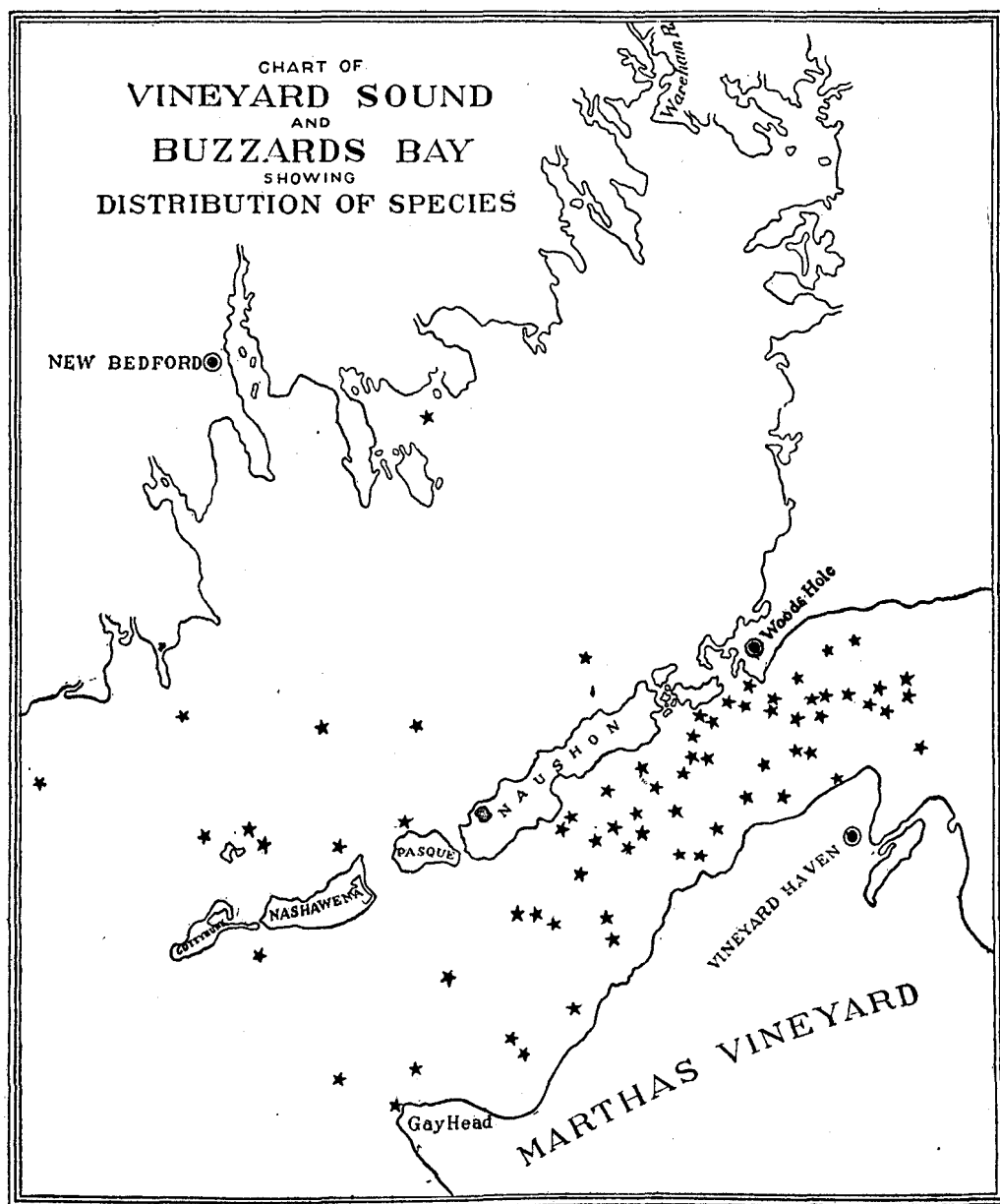
CHART 17.—*Eudendrium dispar*.

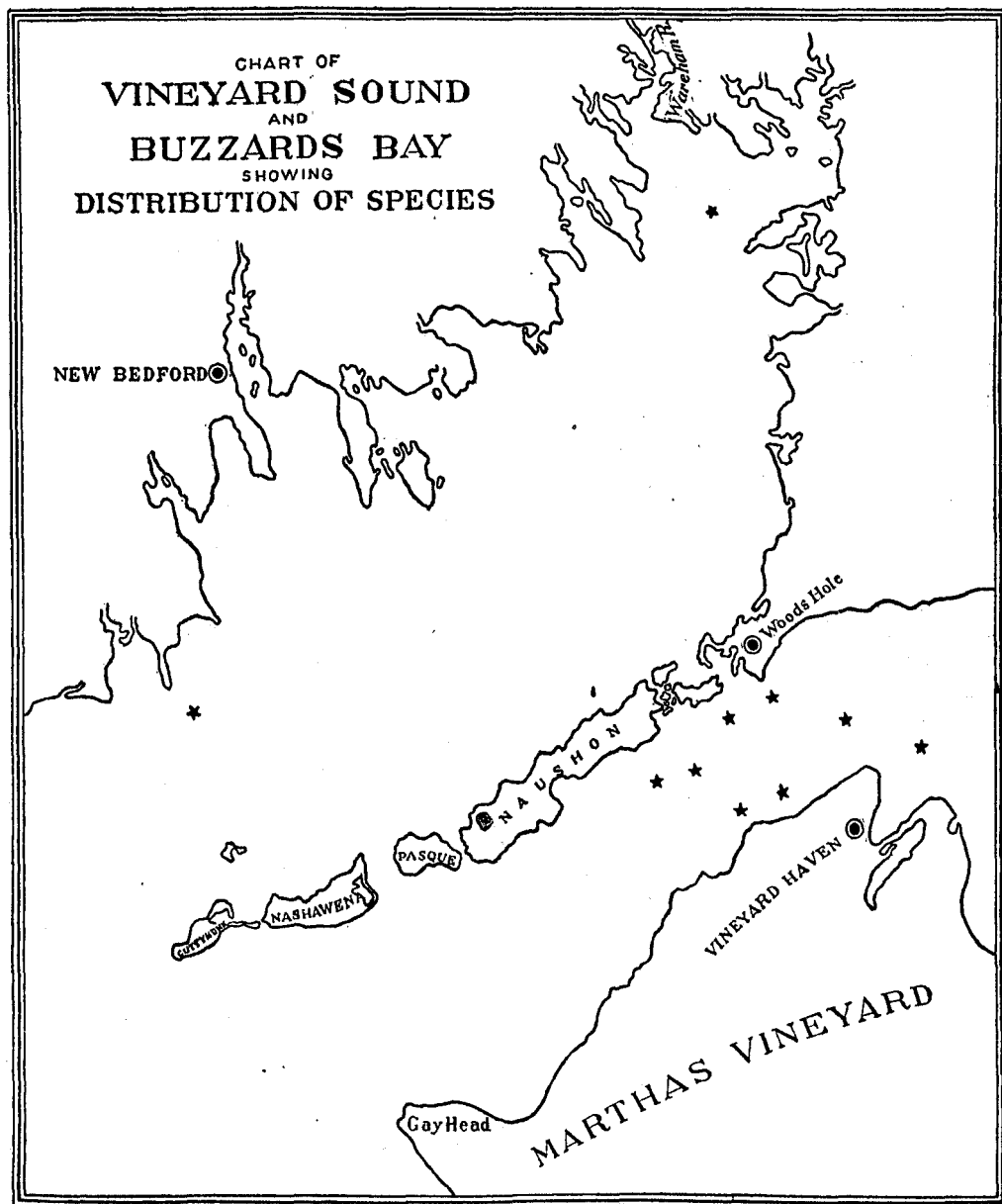
CHART 18.—*Tubularia couthouyi*.

CHART 19.—*Tubularia crocea*.

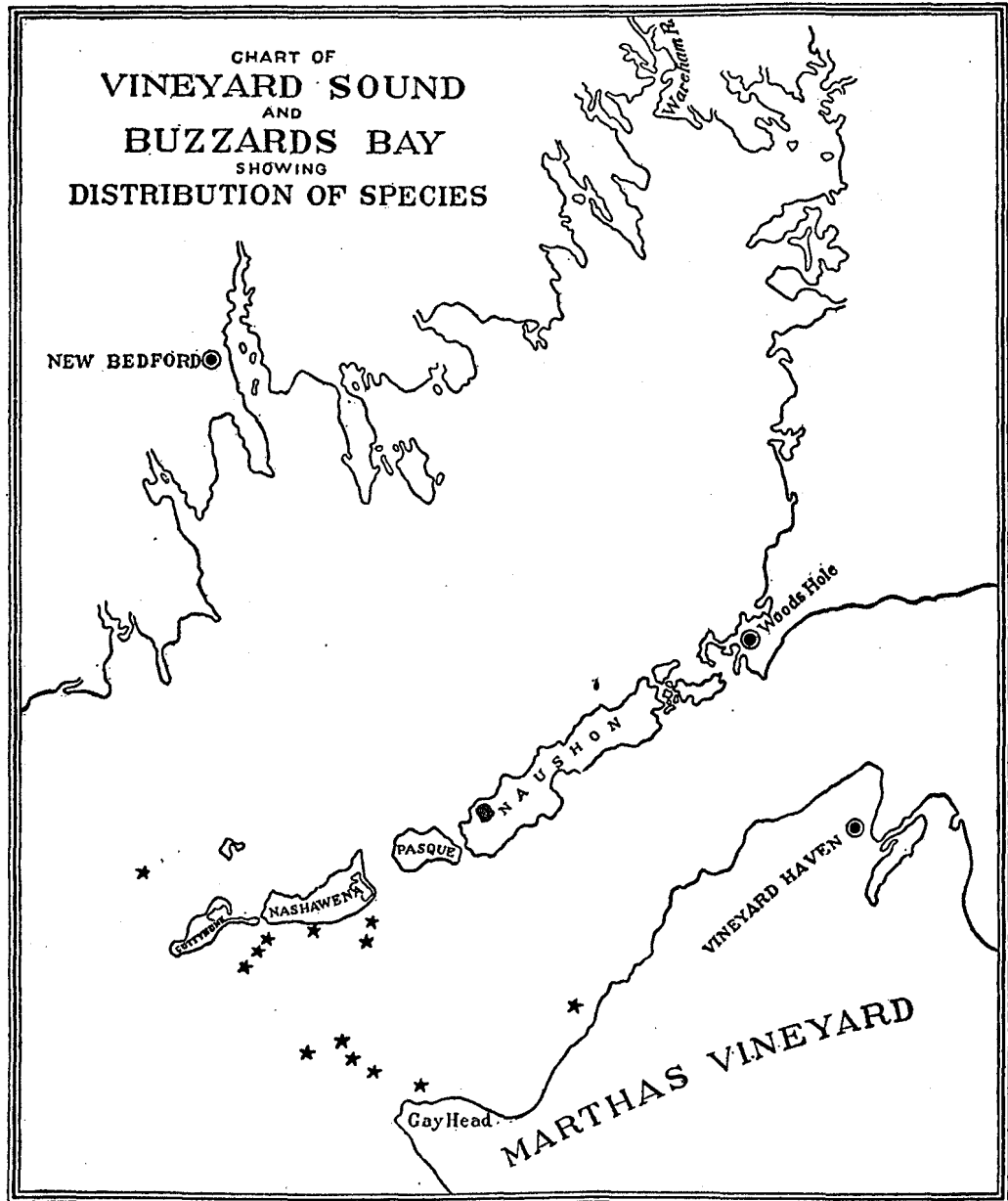
CHART 20.—*Obelia geniculata*.

CHART 21.—*Halecium halecinum*.

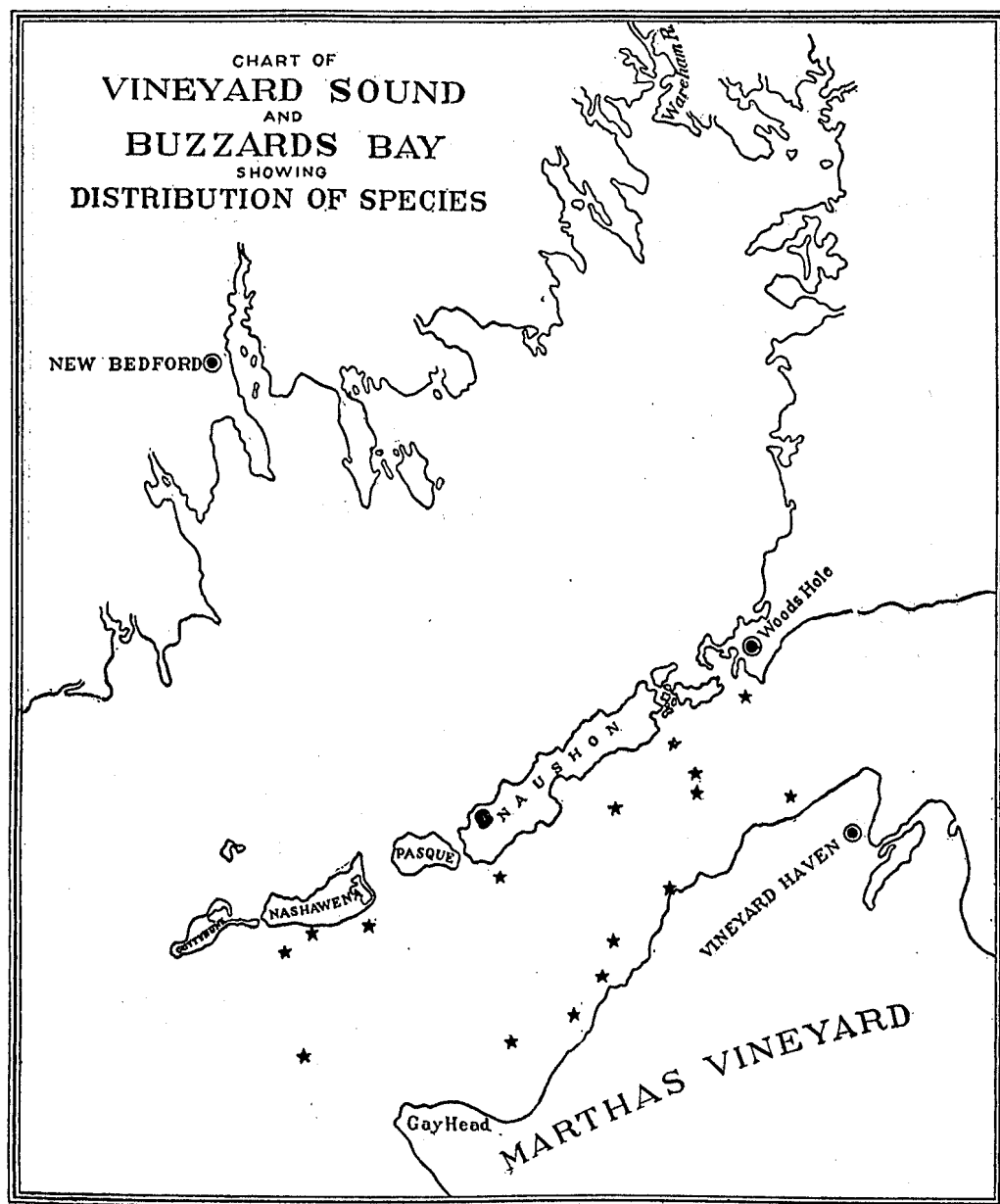
CHART 22.—*Thuiaria argentea*.

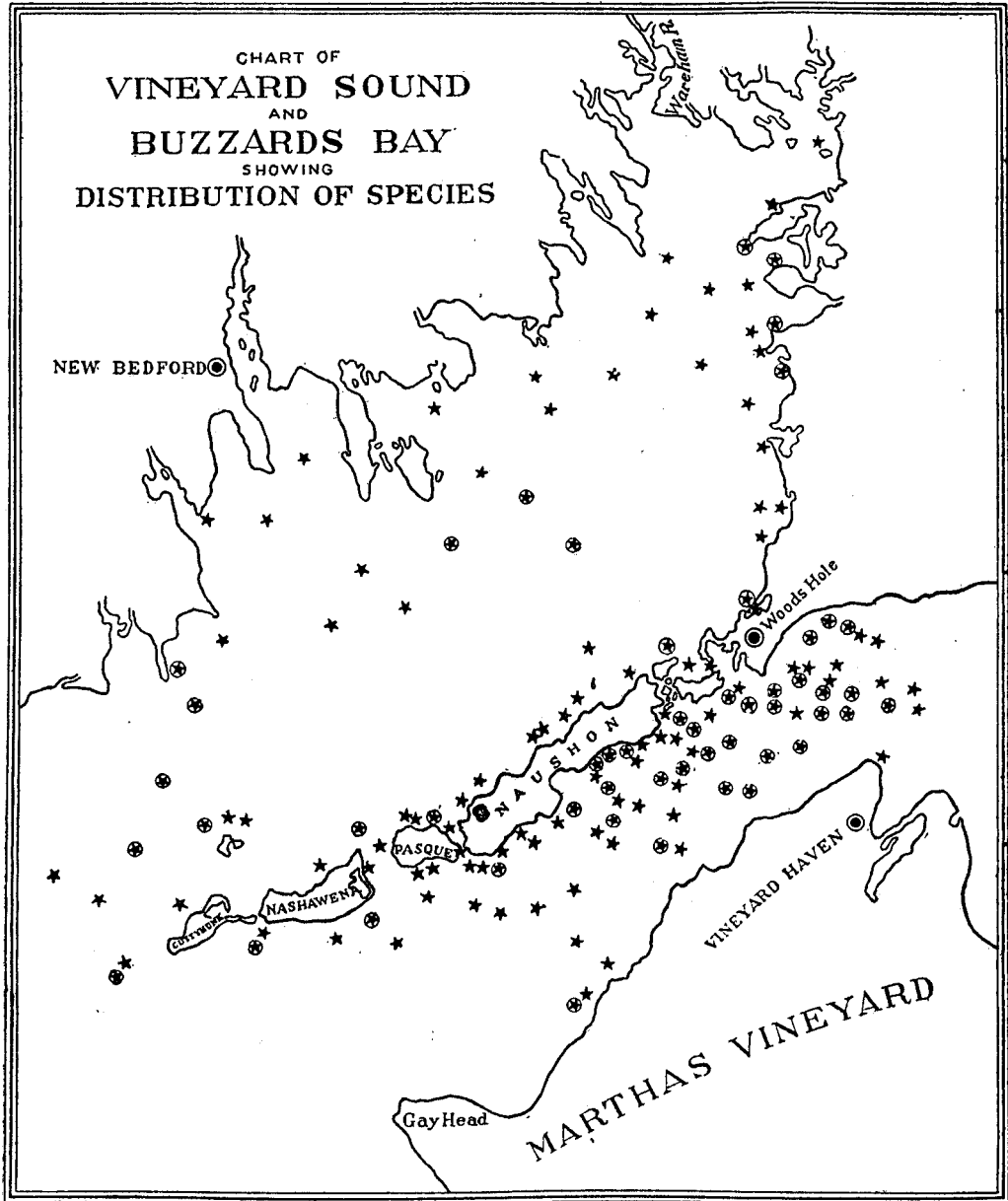
CHART 23.—*Schizotricha tenella*.

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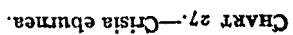
CHART 24.—*Alcyonium carneum*.

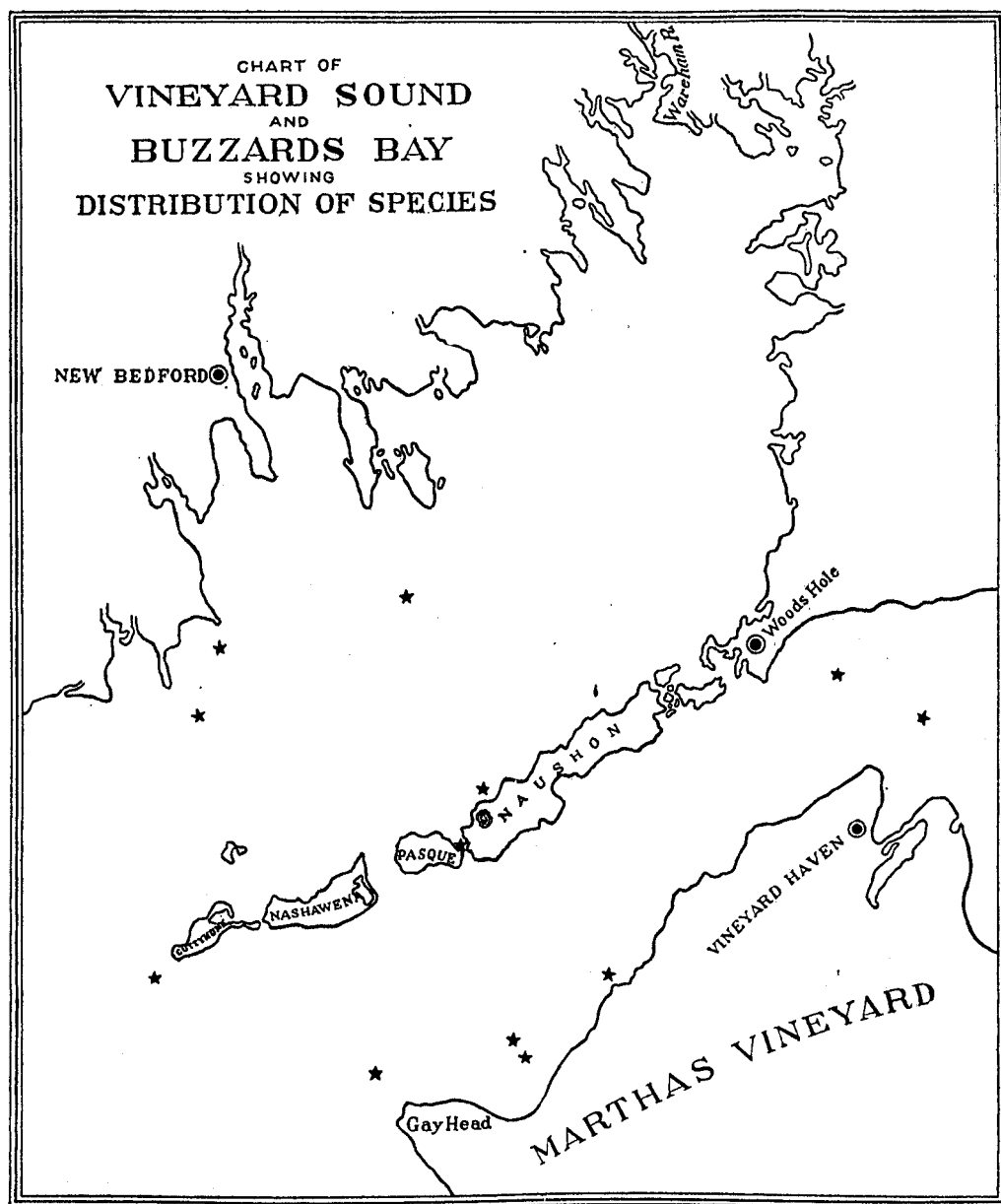


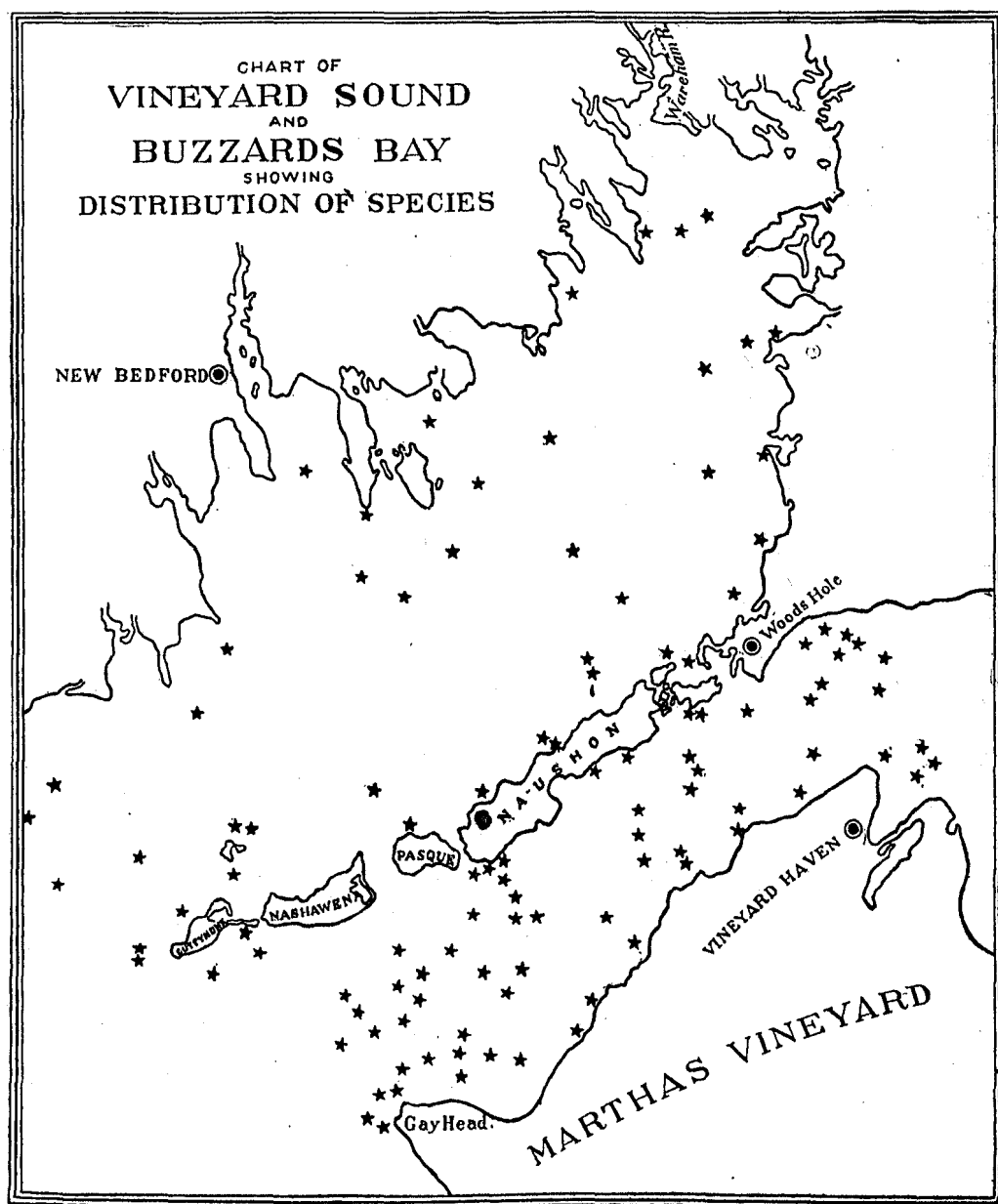
CHART 25.—*Metridium dianthus*.

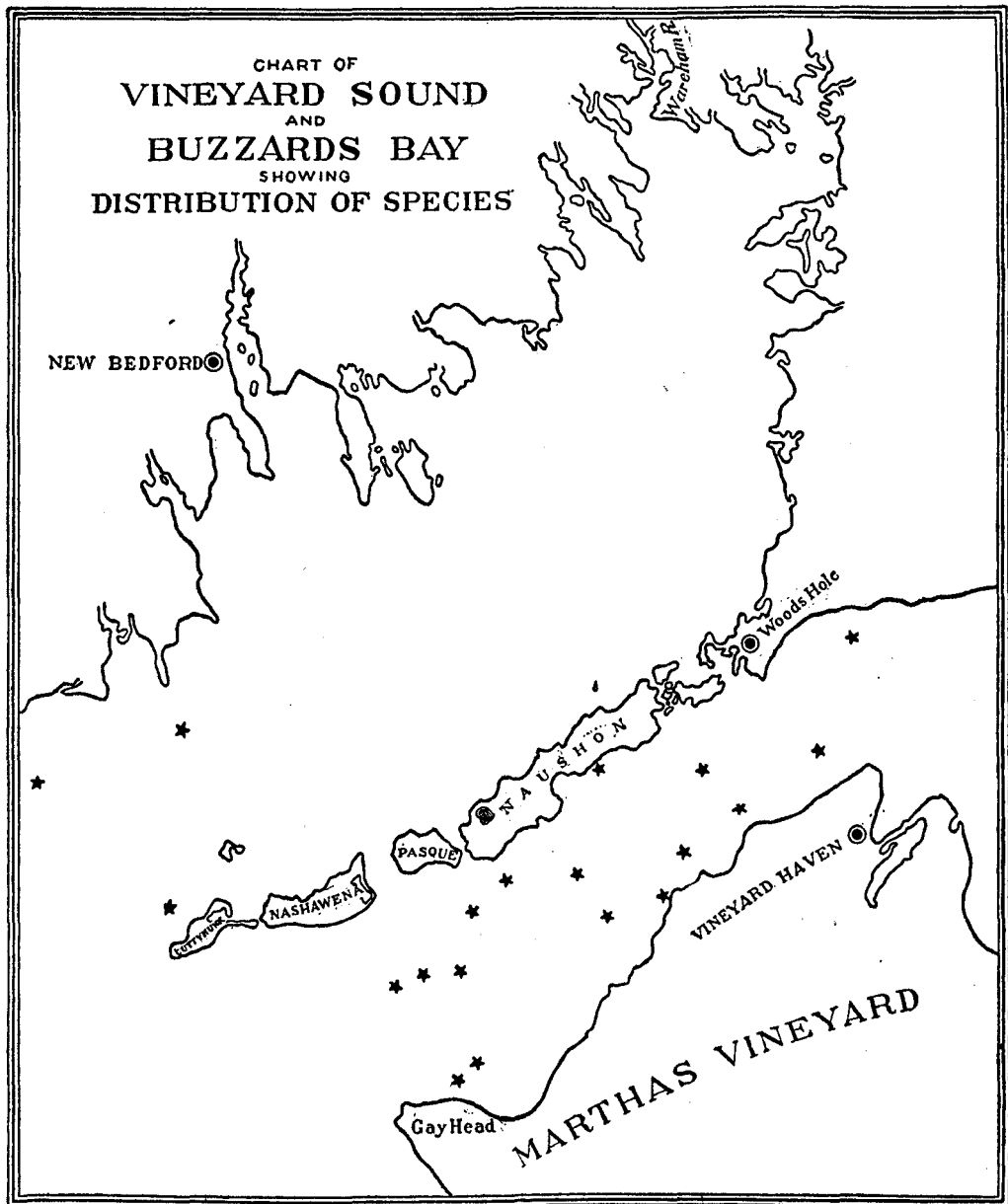
CHART 26.—*Astrangia danae*.

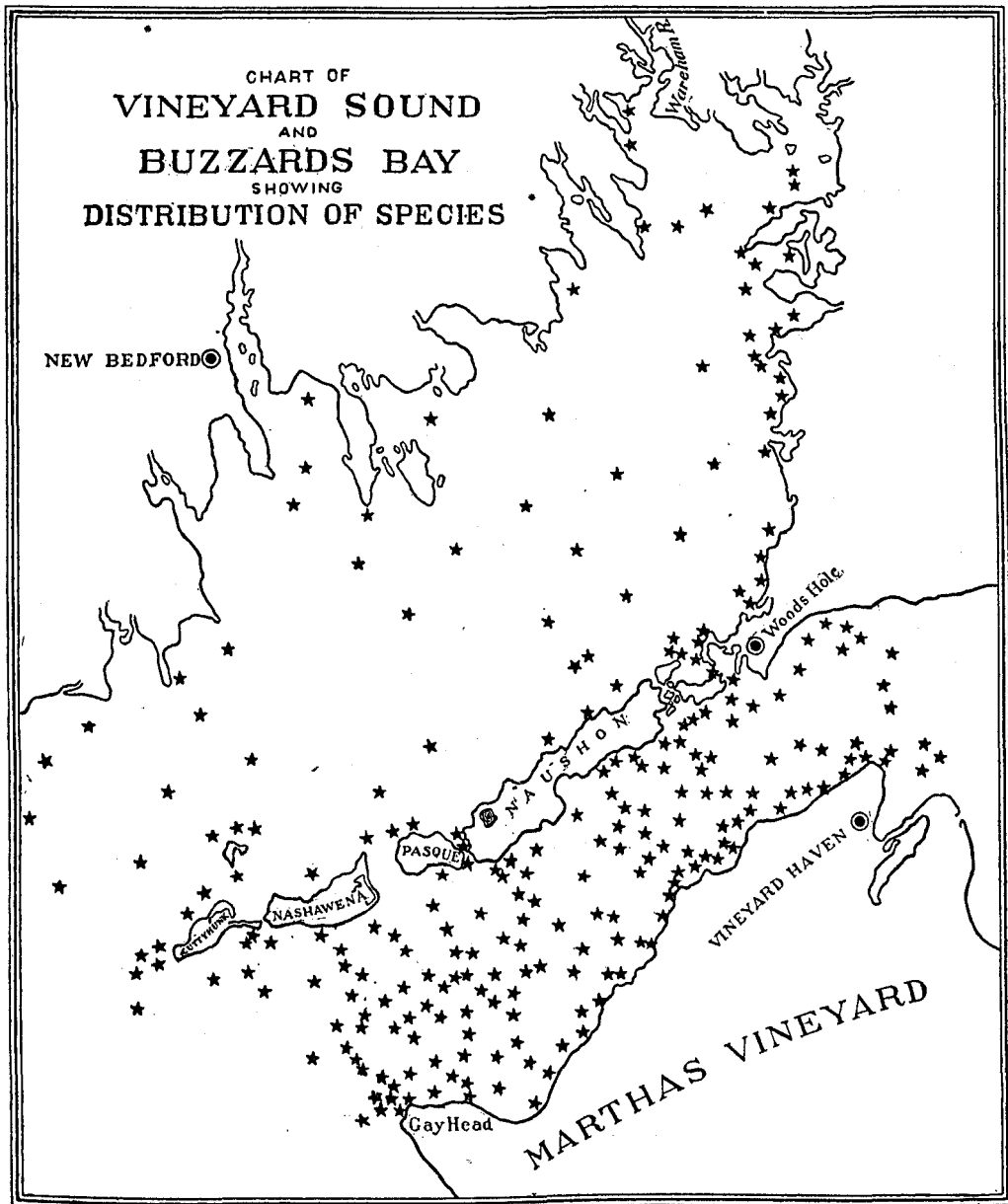
Upon the chart for this coral, and those for the shell-bearing echinoderms and mollusks, the circles surrounding certain stars denote that living specimens were recorded from the stations thus designated. The absence of a circle at a given station denotes either that dead remains alone were recorded or that the records do not indicate the condition of the specimens. This practice has not been followed except in the case of shell-bearing organisms. For others, it may be assumed that the records nearly always relate to living specimens.

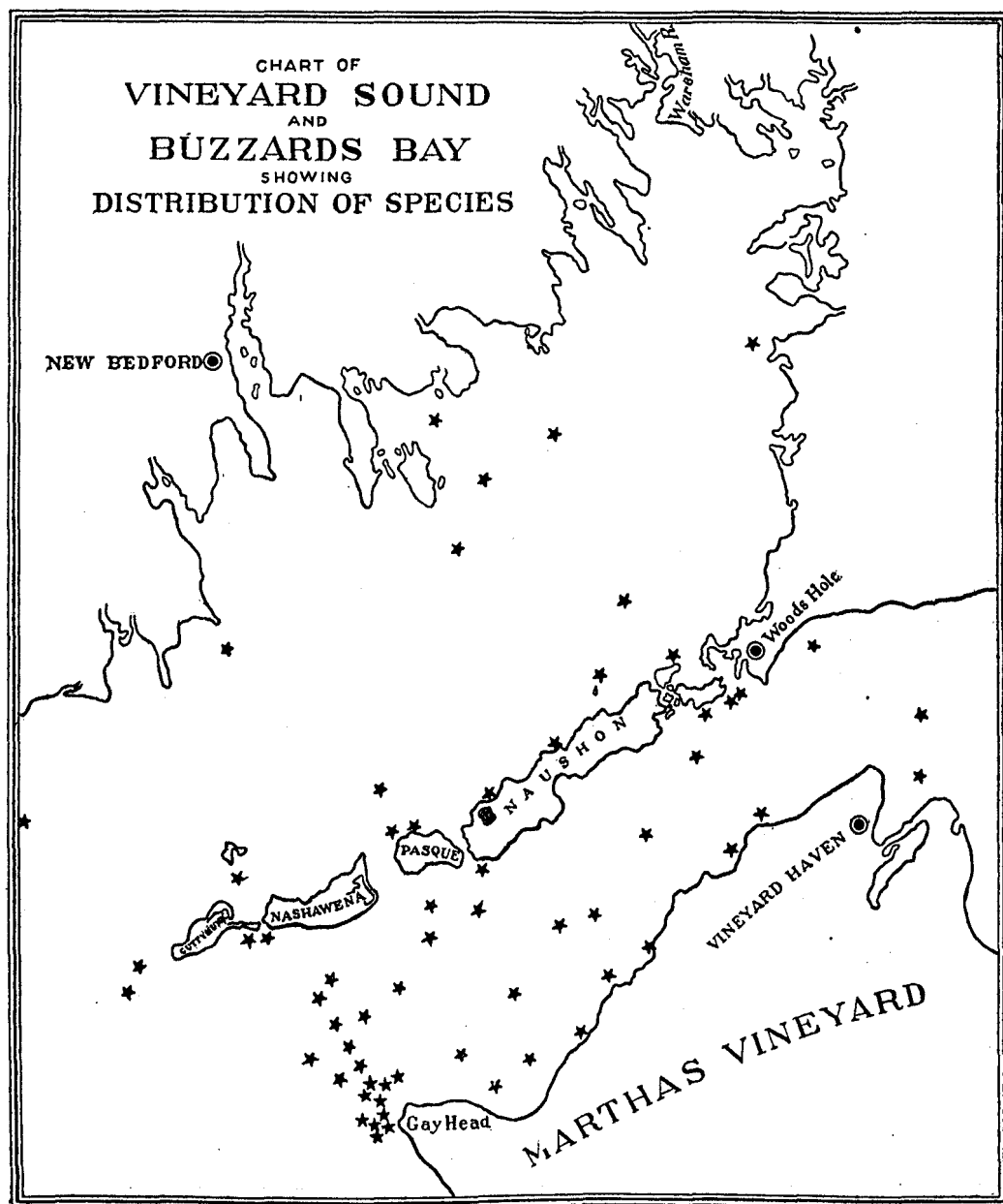


CHART 28.—*Tubulipora liliacea*.

CHART 29.—*Atea anguina*.

CHART 30.—*Bicellaria ciliata*.

CHART 31.—*Bugula turrita*.

CHART 32.—*Membranipora pilosa*.



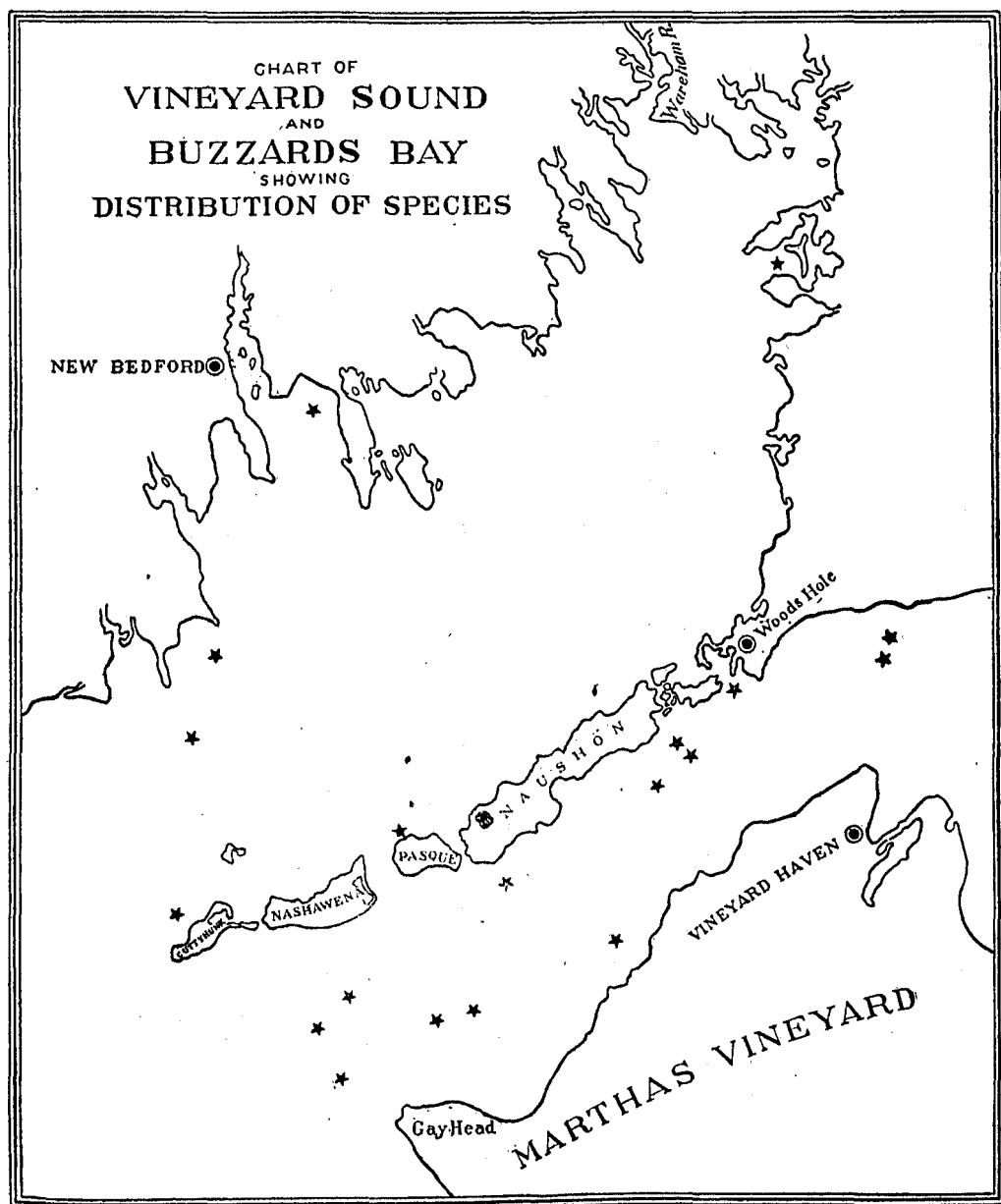
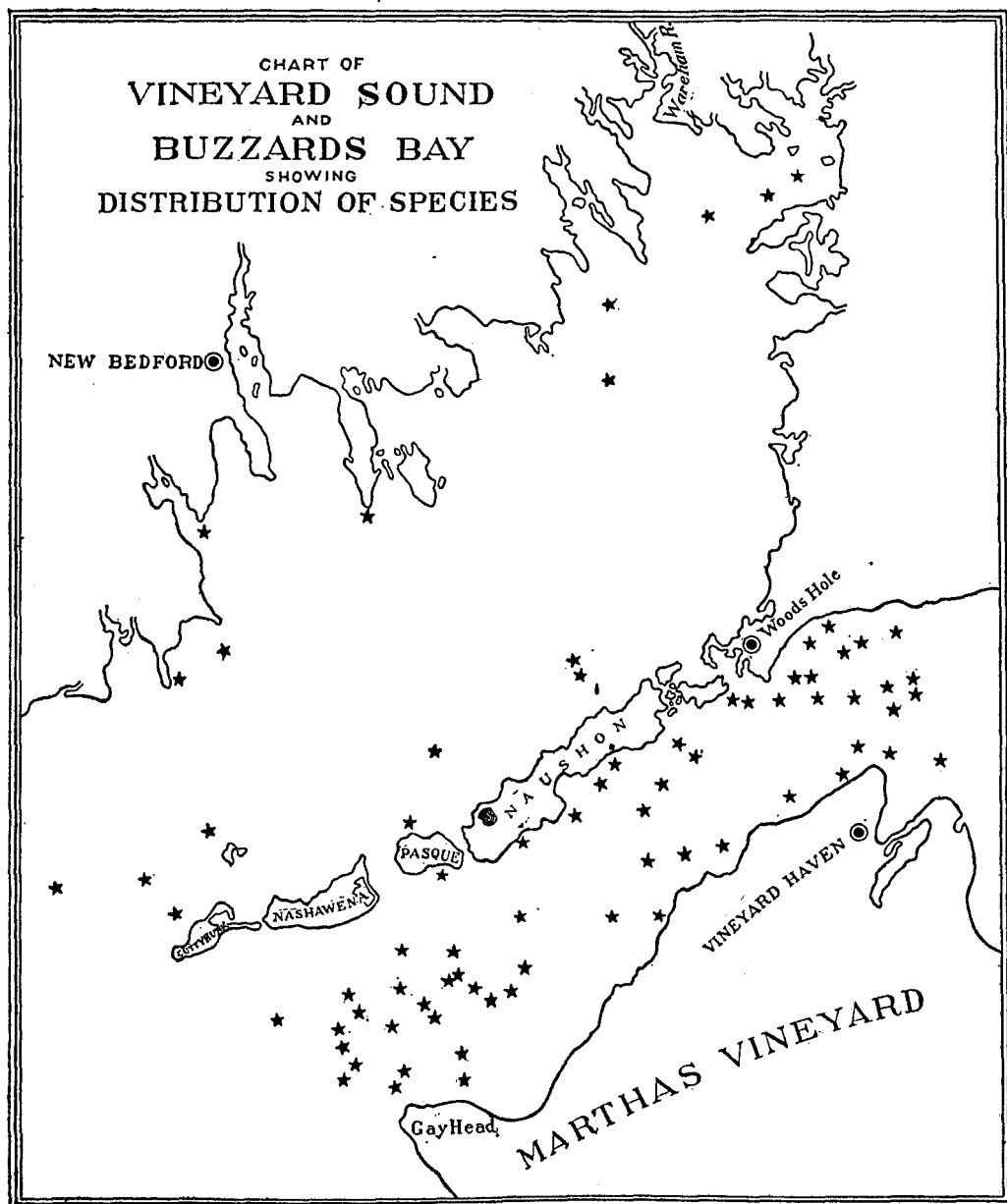
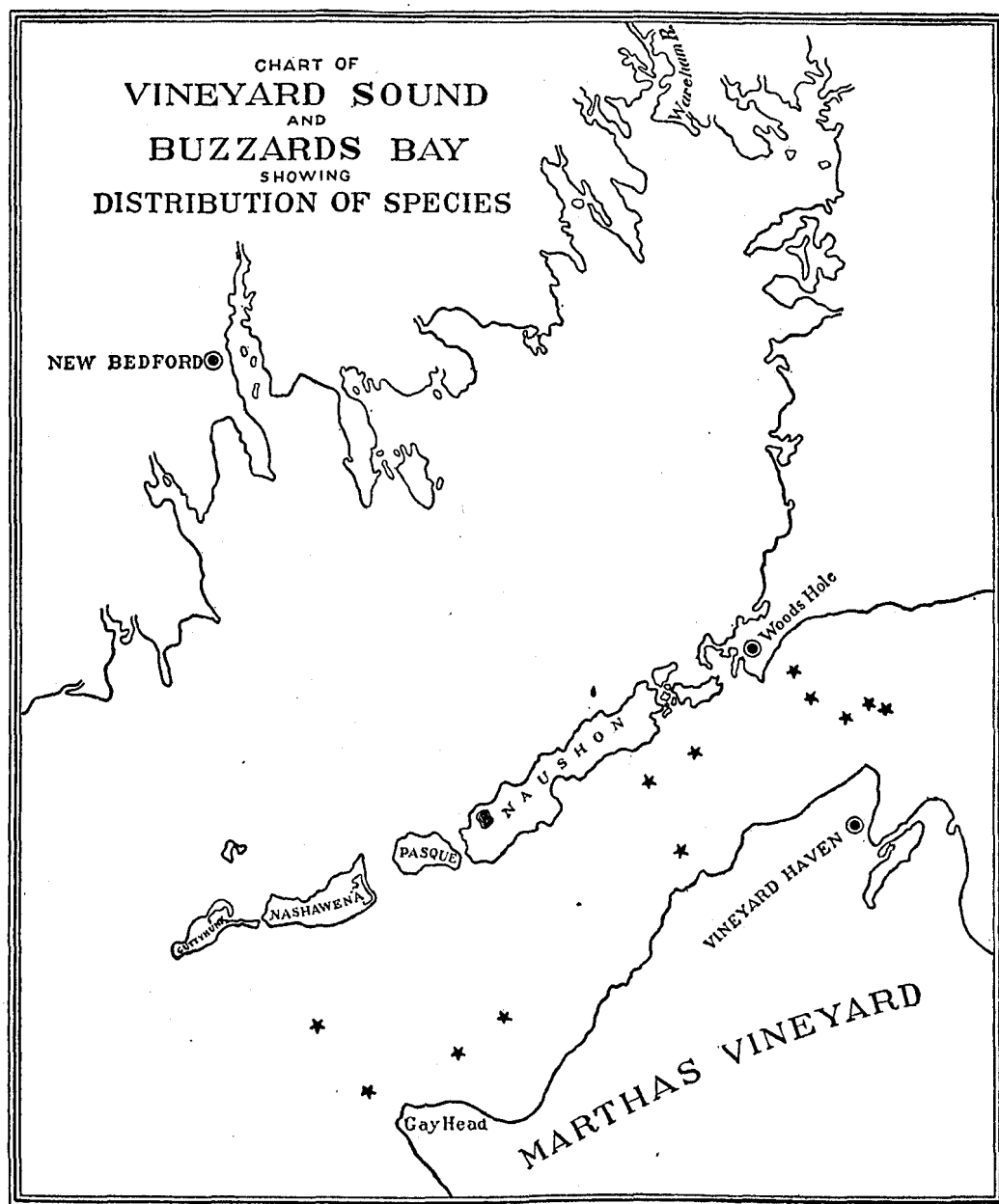
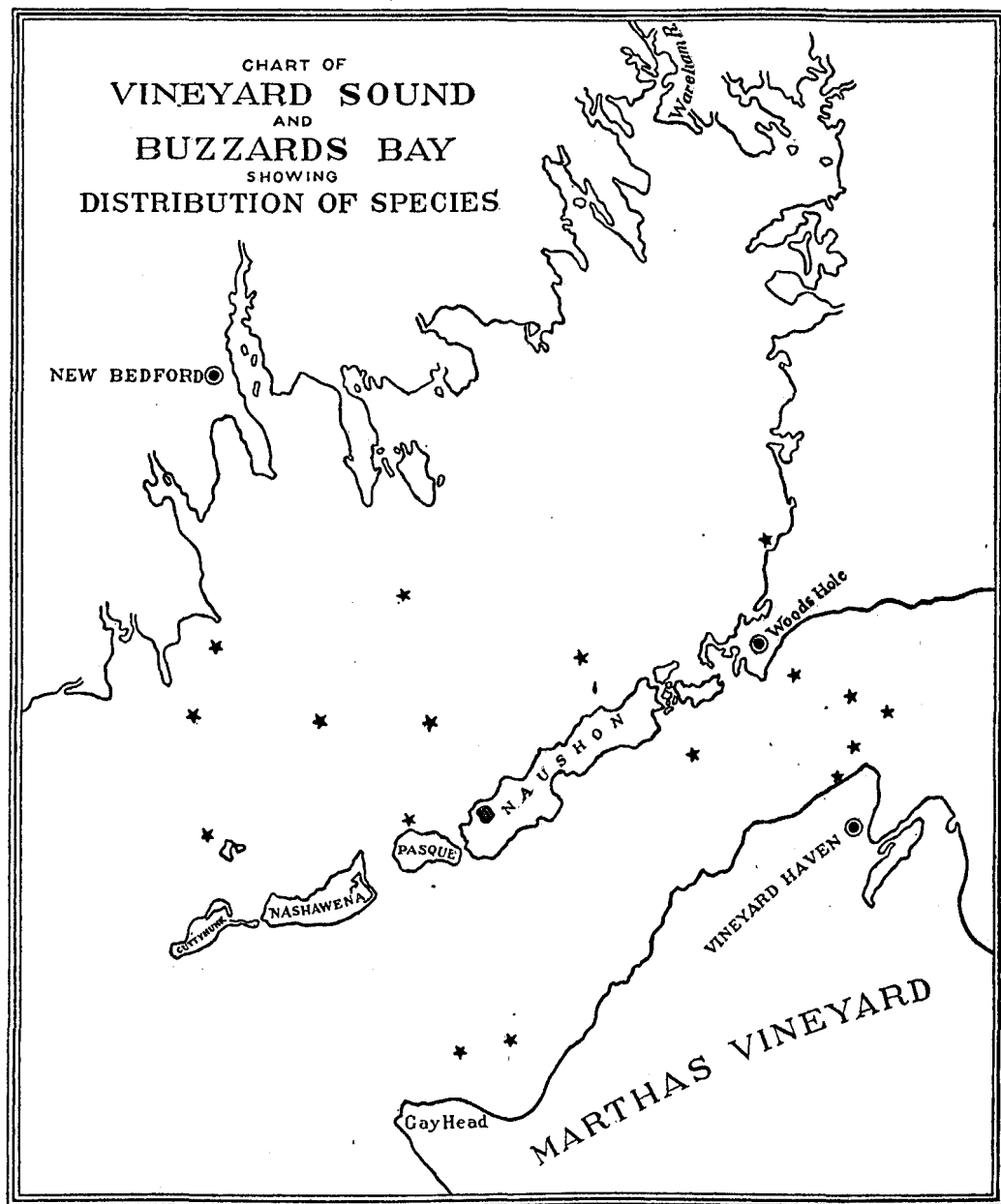
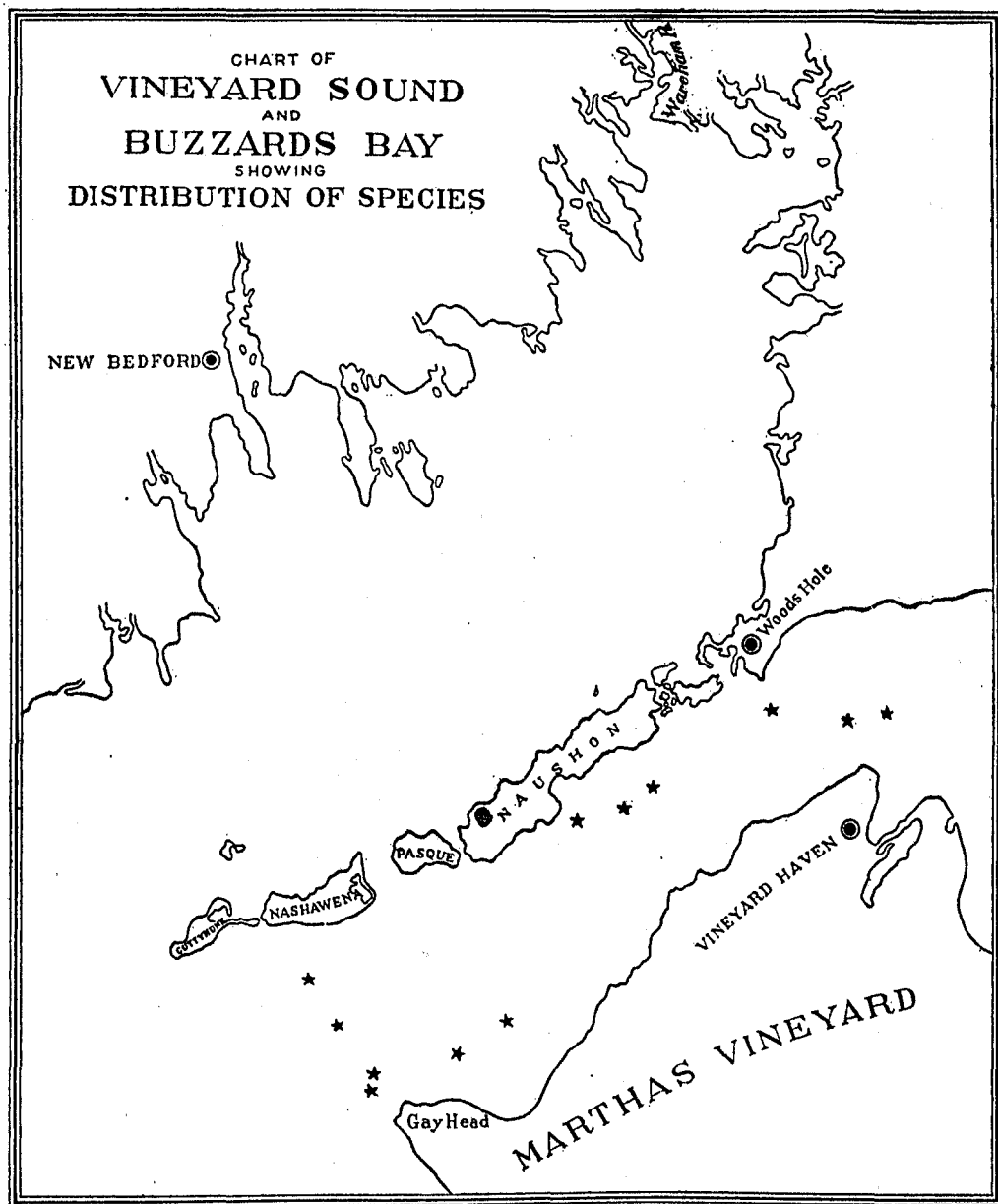


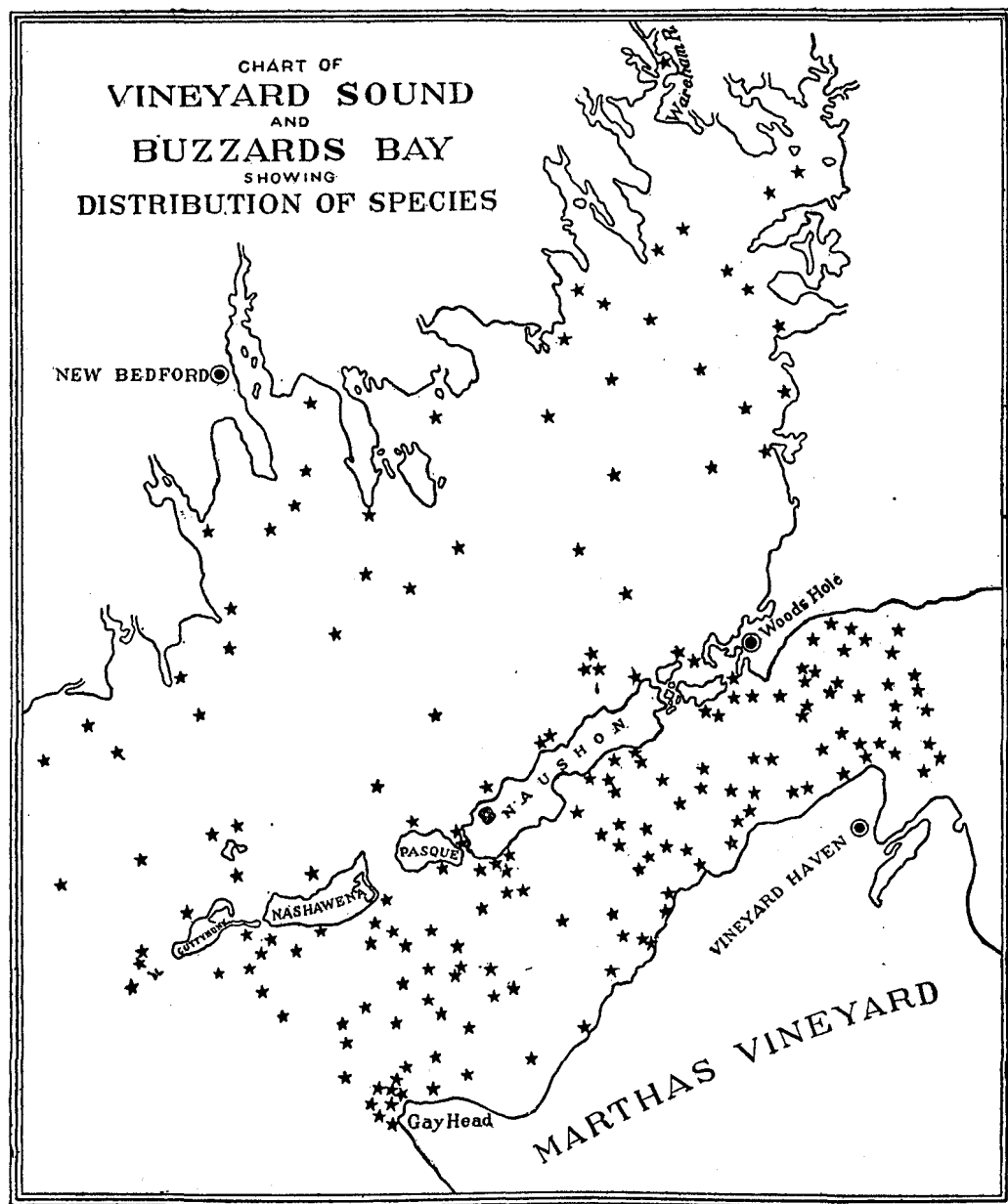
CHART 33.—*Membranipora monostachys*.

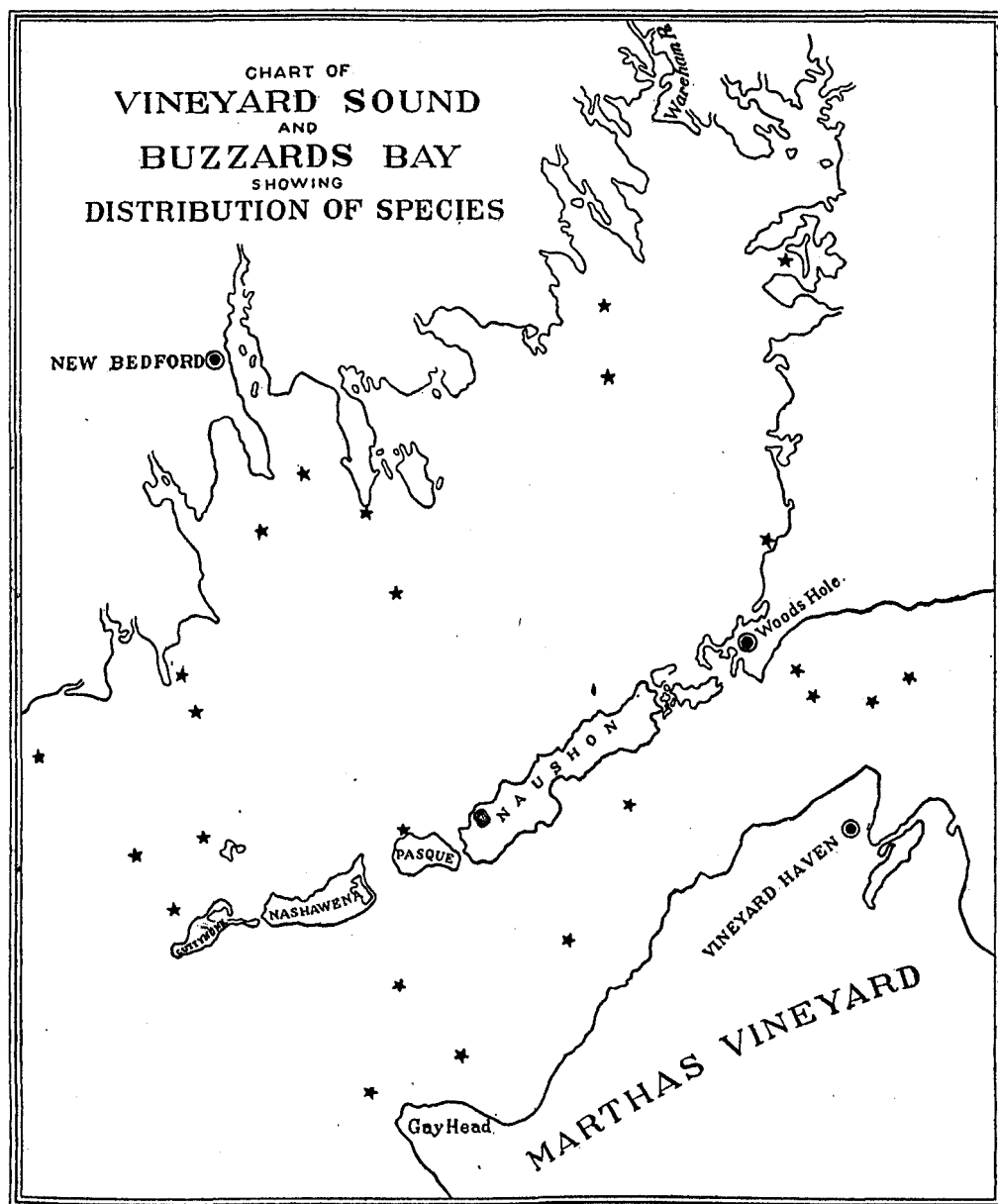
CHART 34.—*Membranipora tenuis*.

CHART 35.—*Membranipora flemingii*.

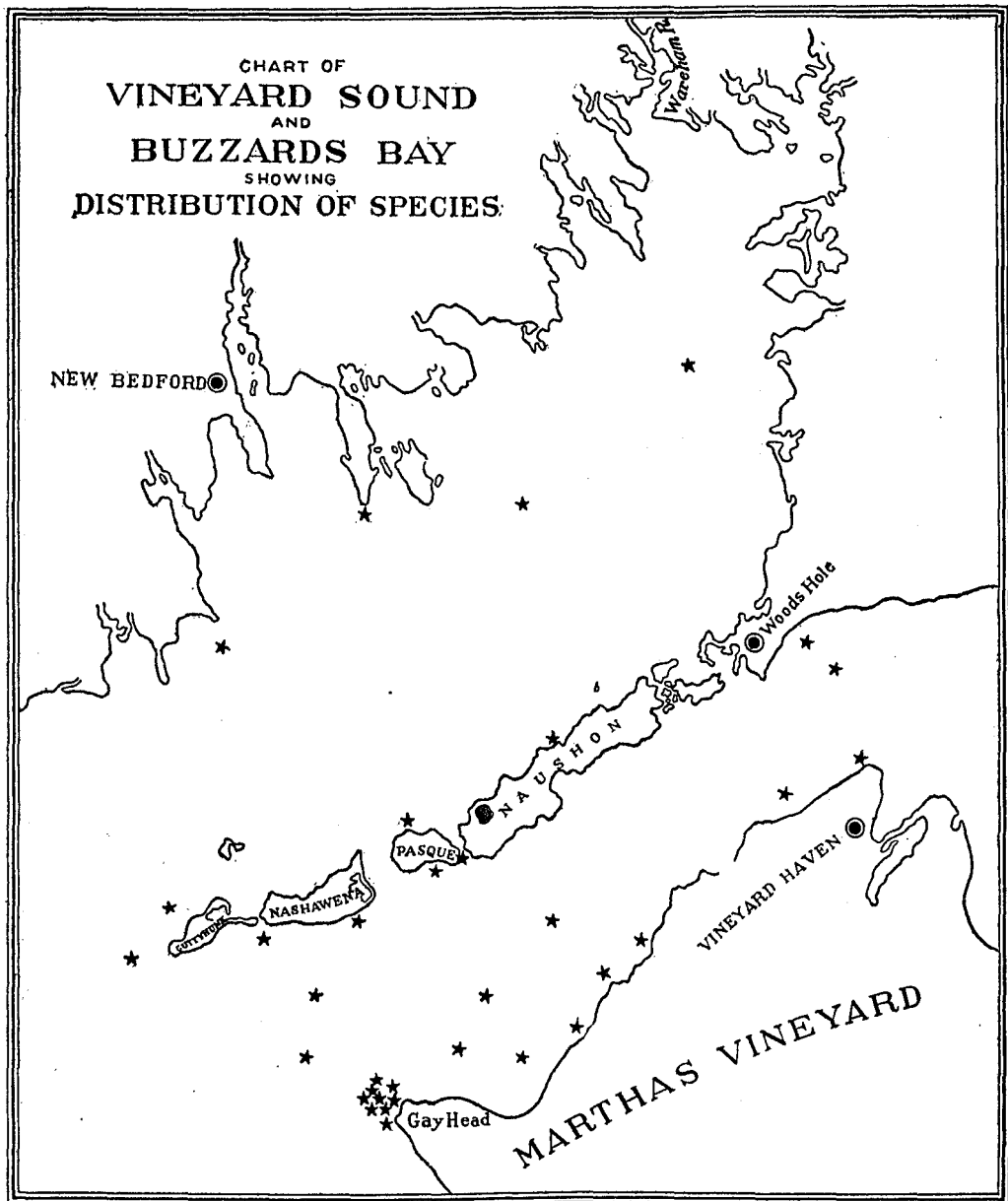
CHART 36.—*Membranipora aurita*.

CHART 37.—*Cribrilinea punctata*.

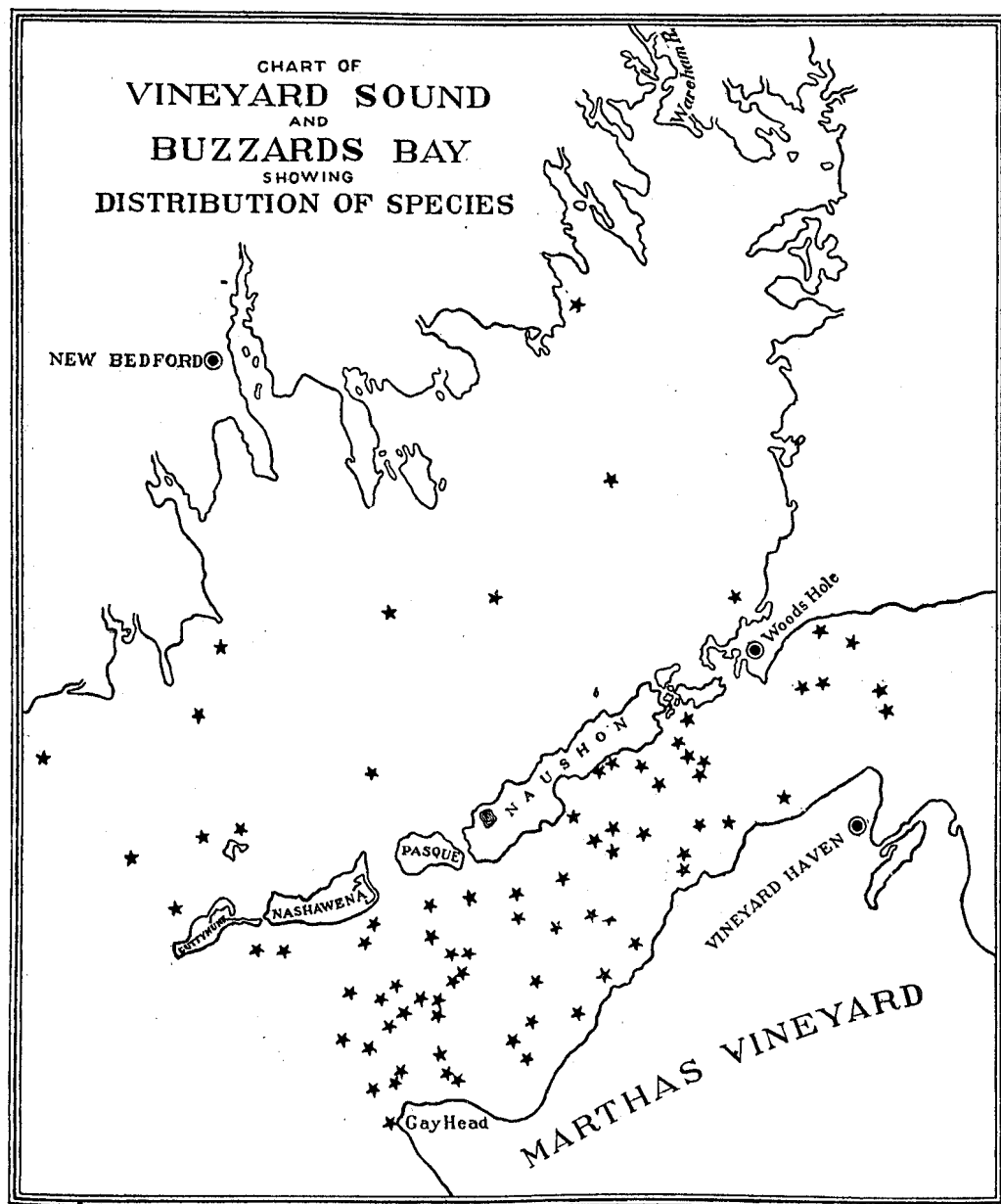
CHART 38.—*Schizoporella unicornis*.

CHART 39.—*Schizoporella biaperta*.

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CHART 40.—*Hippothoa hyalina*.



CHART 41.—*Cellepora americana*.

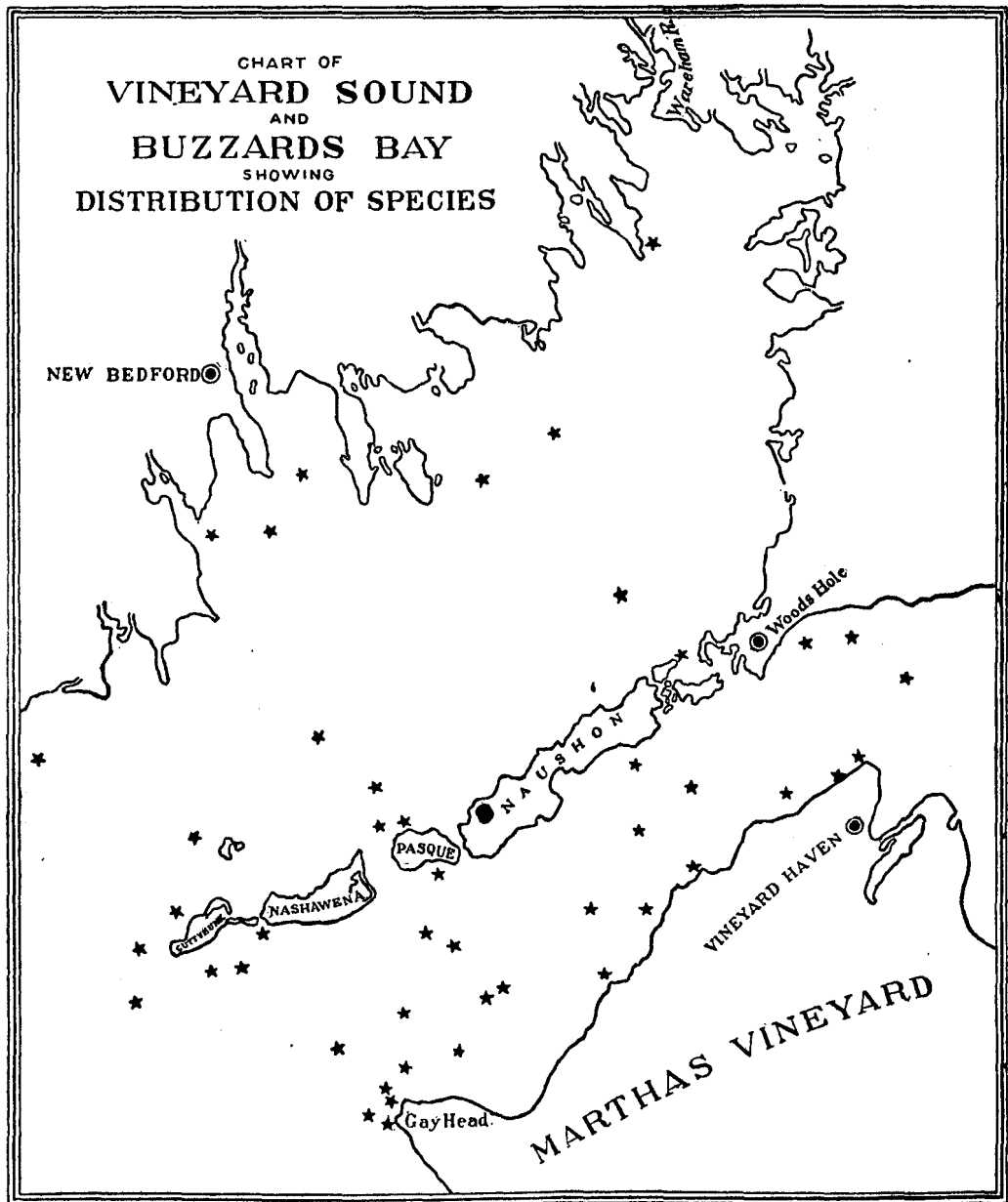
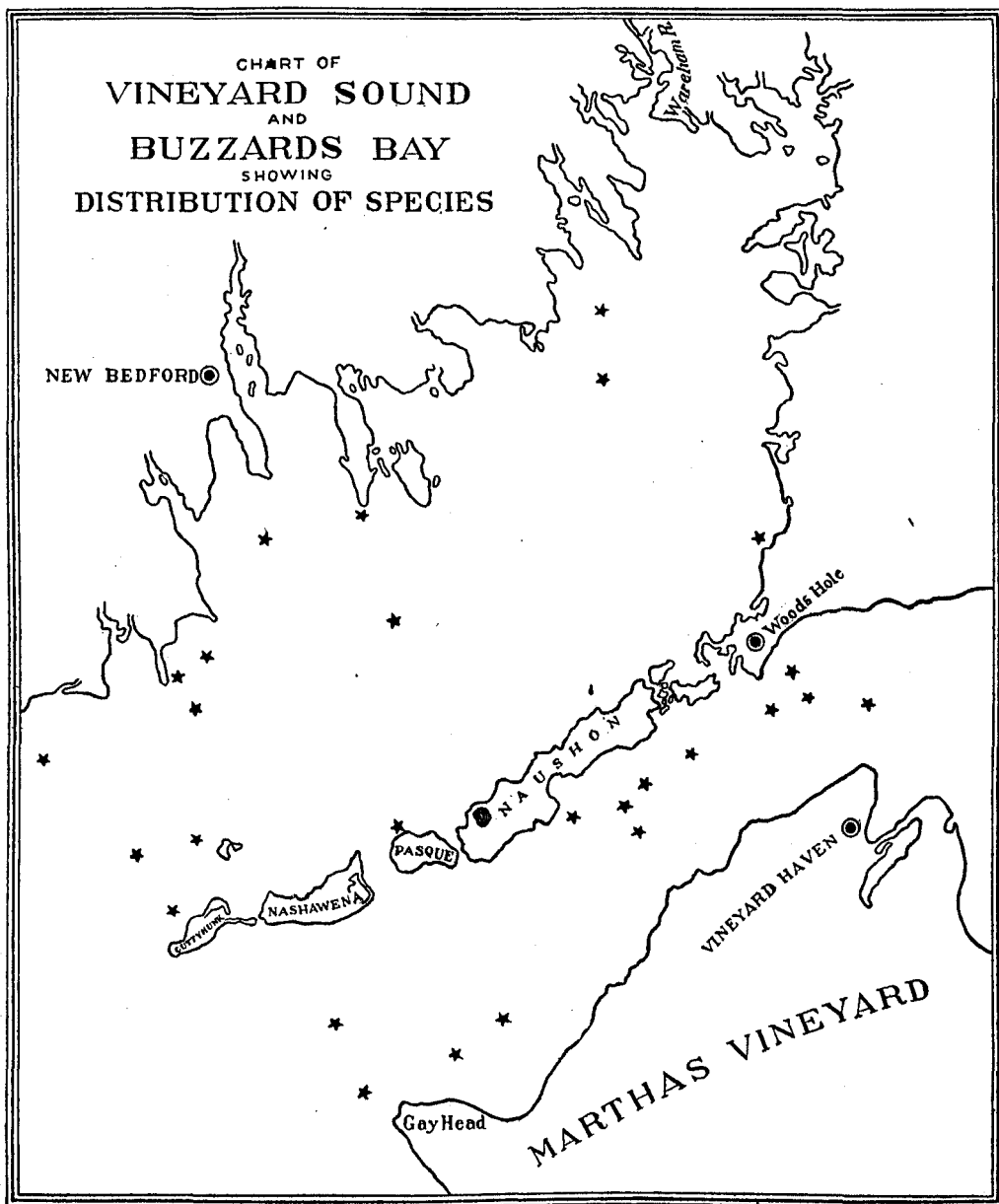
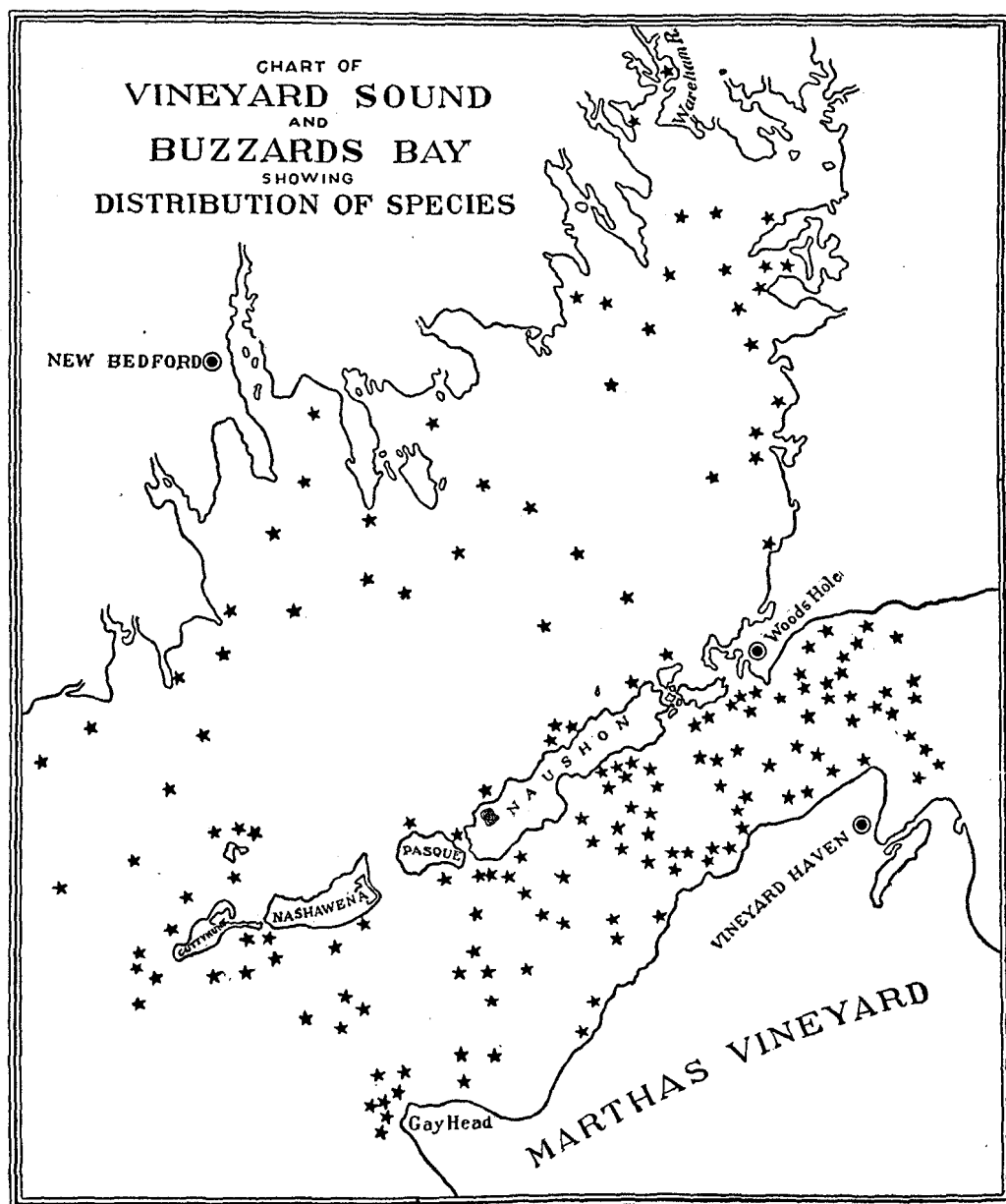
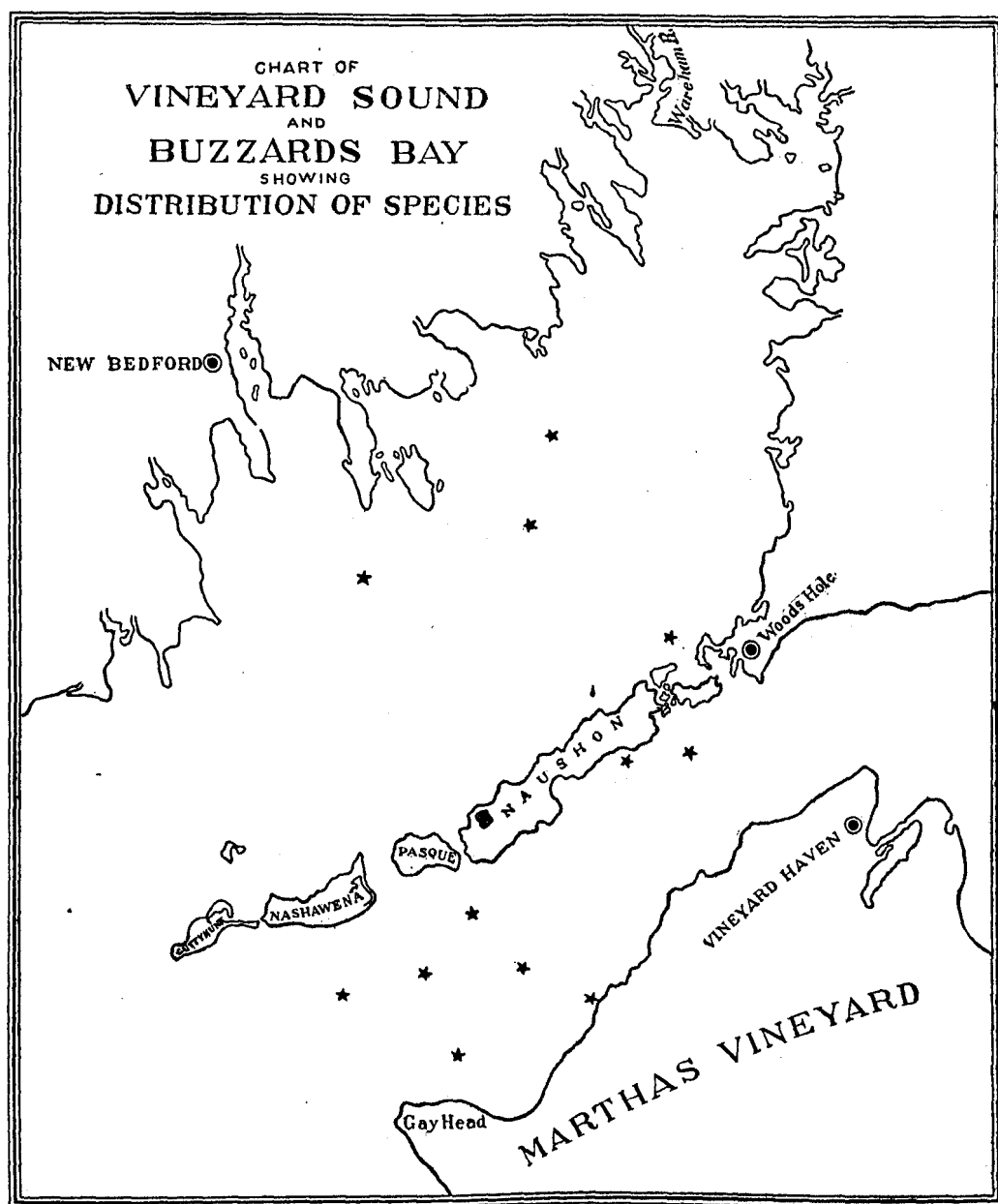


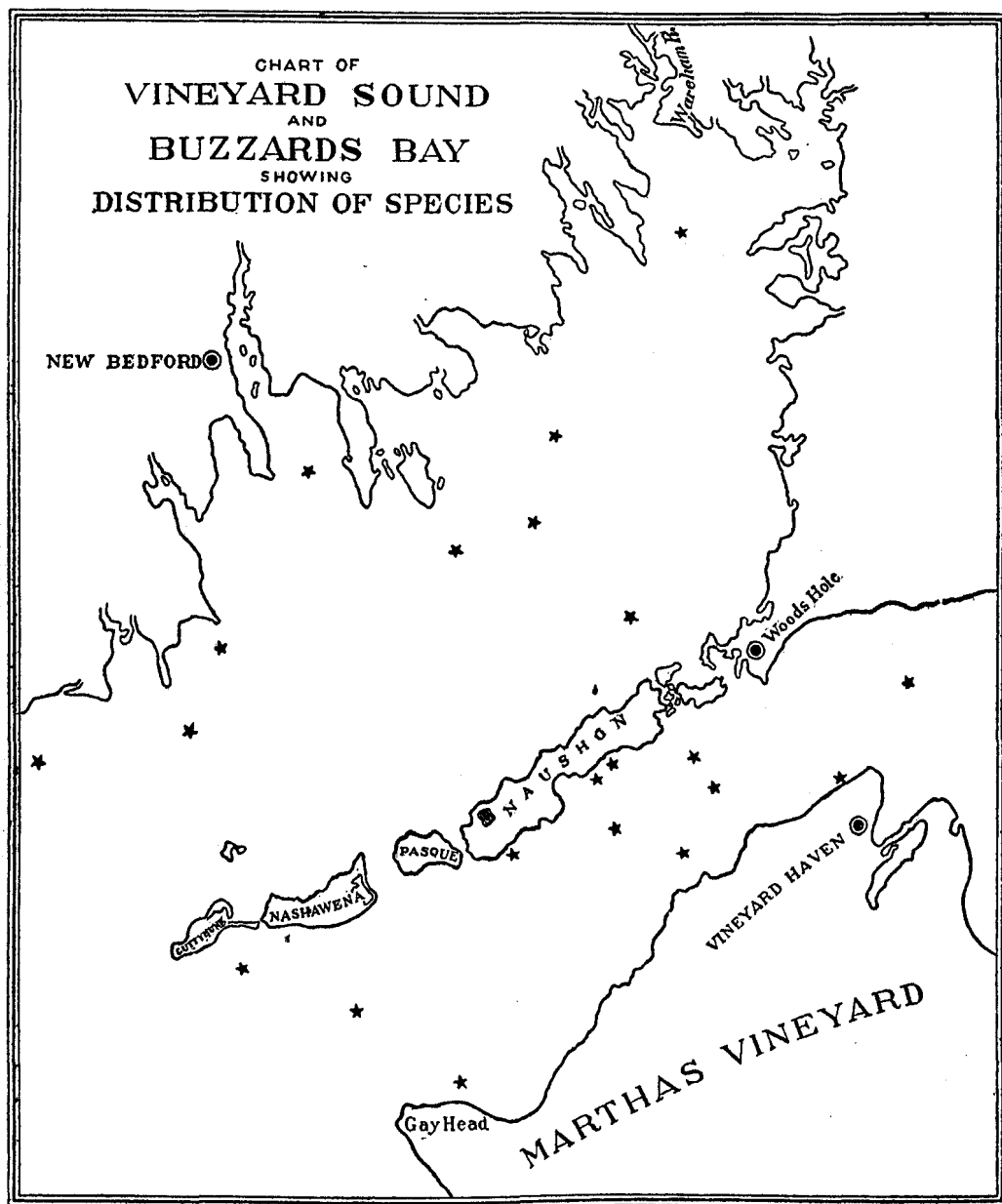
CHART 42.—*Lepralia pallasiana* and *L. americana*.

Owing to a confusion of the records, the distribution of these two species has been plotted upon a single chart.

CHART 43.—*Lepralia pertusa*.

CHART 44.—*Smittia trispinosa nitida*.

CHART 45.—*Bowerbankia gracilis*.

CHART 46.—*Hippuraria armata*.

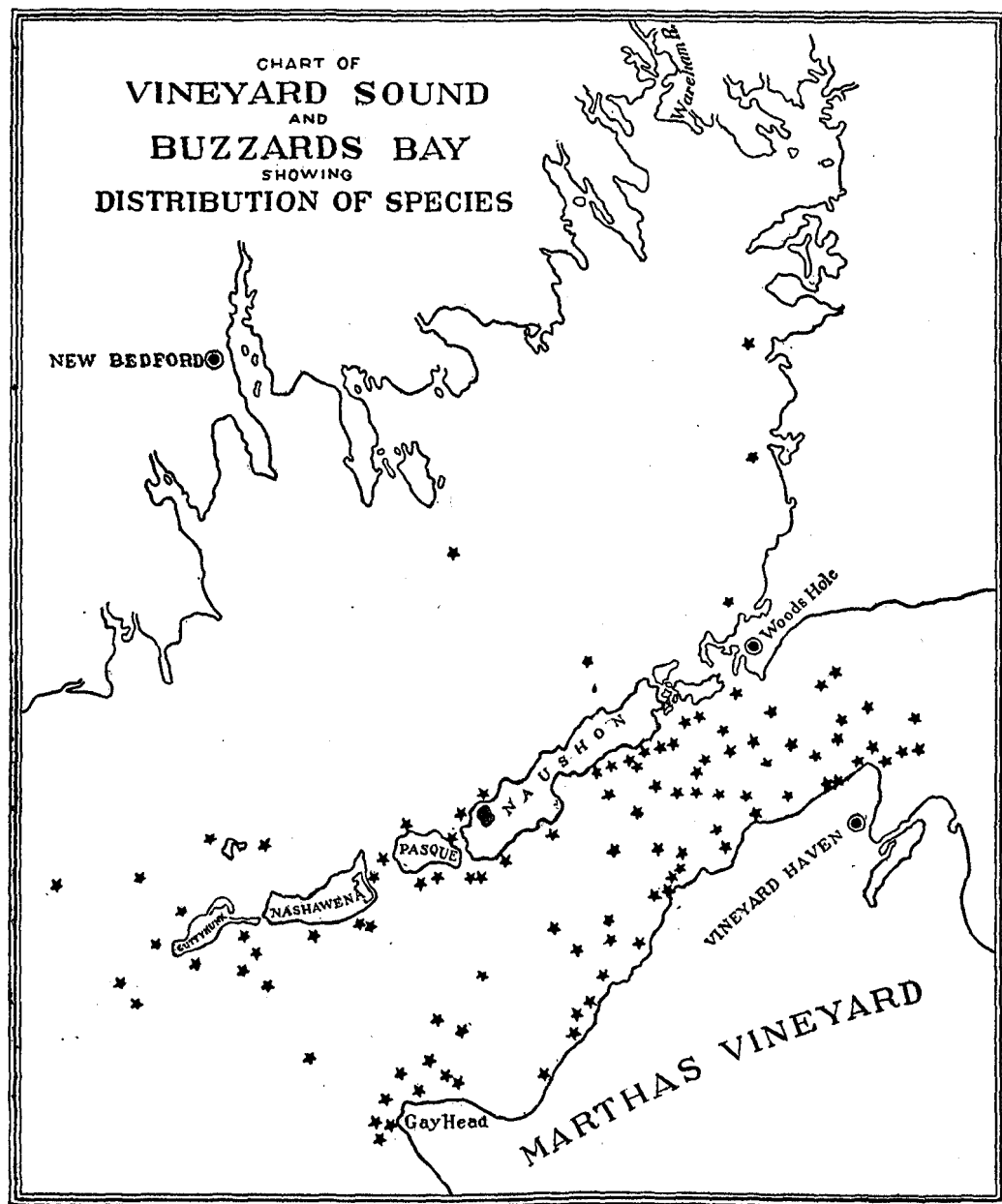
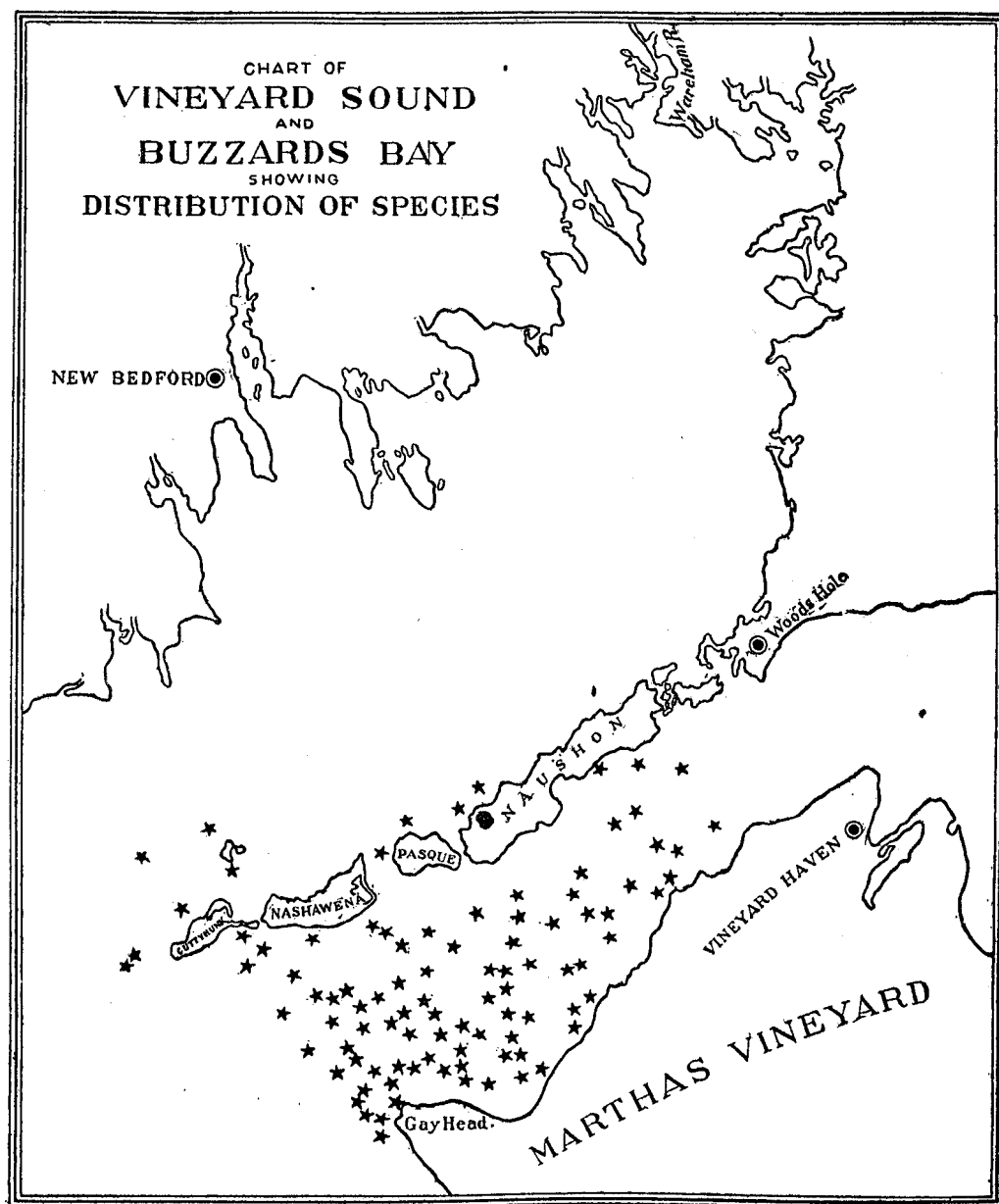
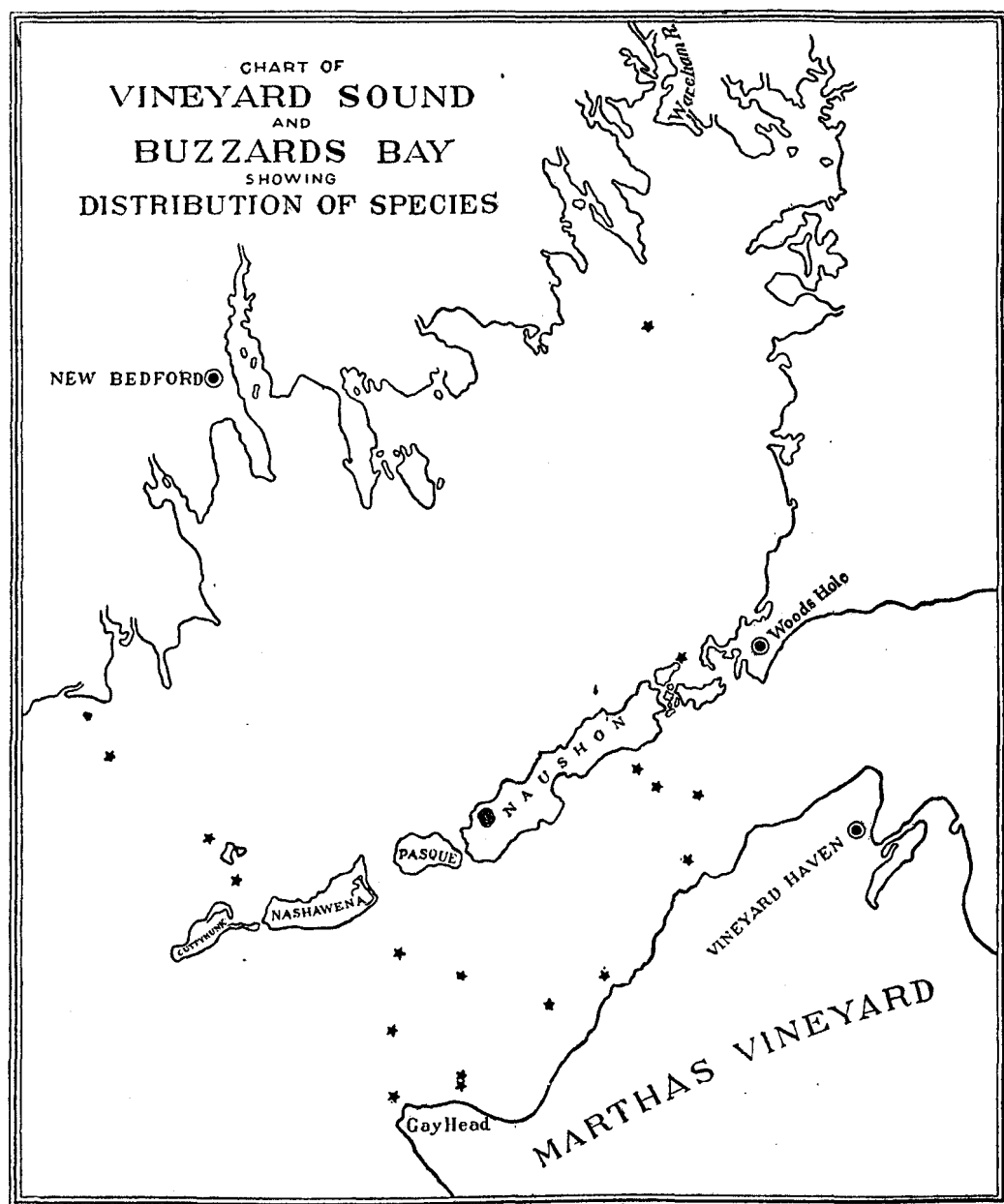




CHART 48.—*Astierias forbesi*.



CHART 49.—*Asterias vulgaris*.

CHART 50.—*Amphipholis squamata*.

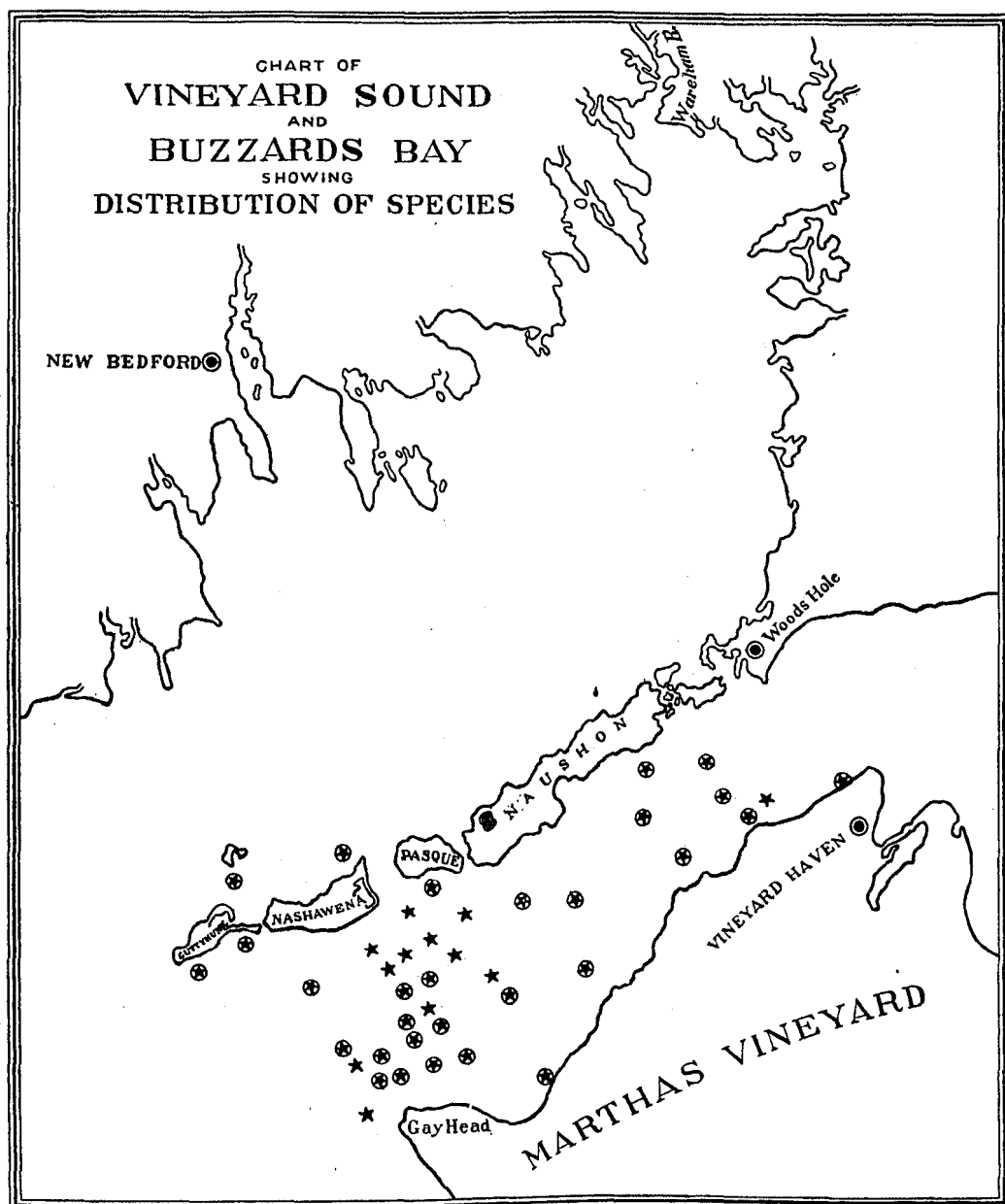


CHART 51.—*Strongylocentrotus droebachiensis*. (See explanation of chart 26.)

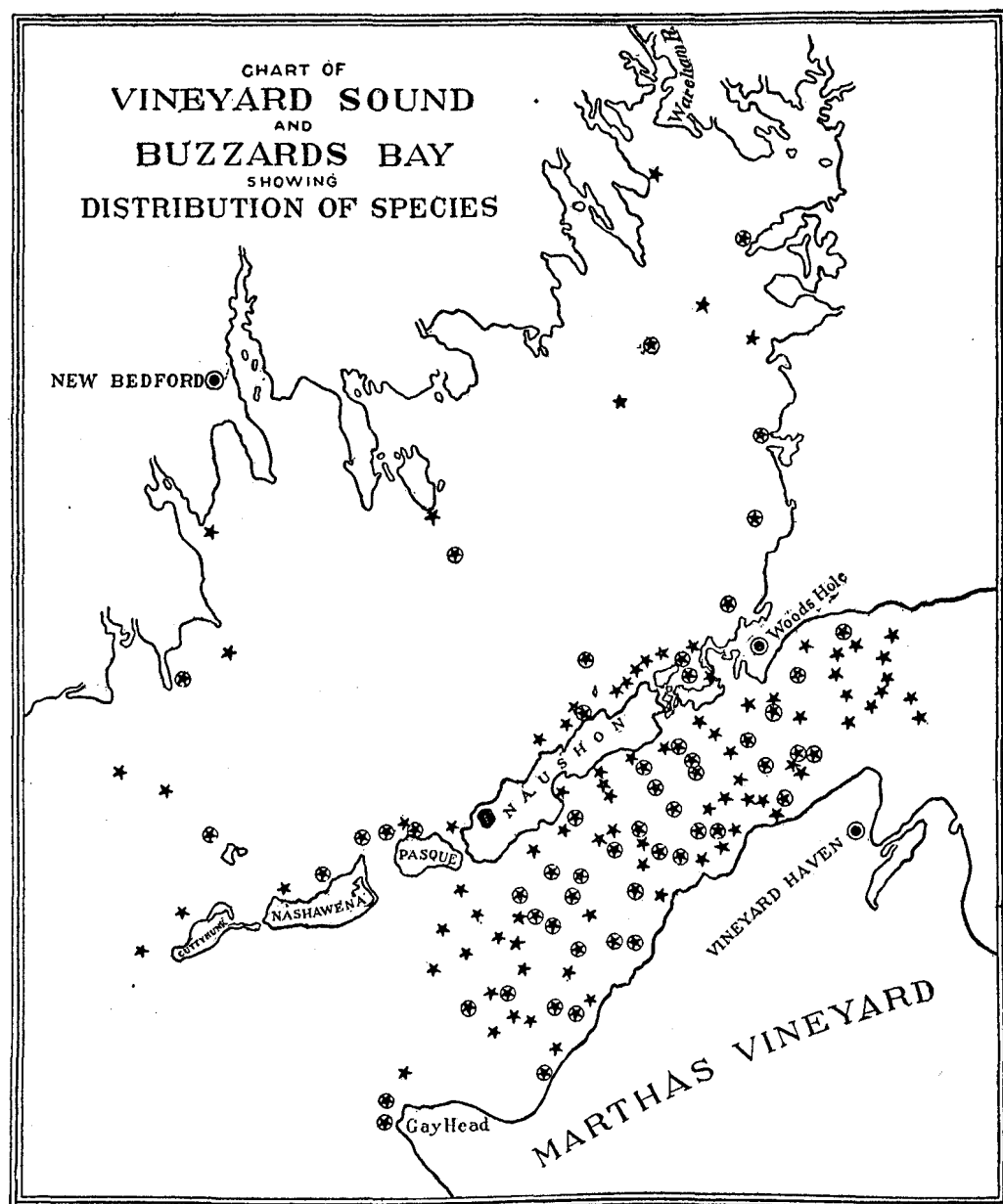


CHART 52.—*Arbacia punctulata*. (See explanation of chart 26.)

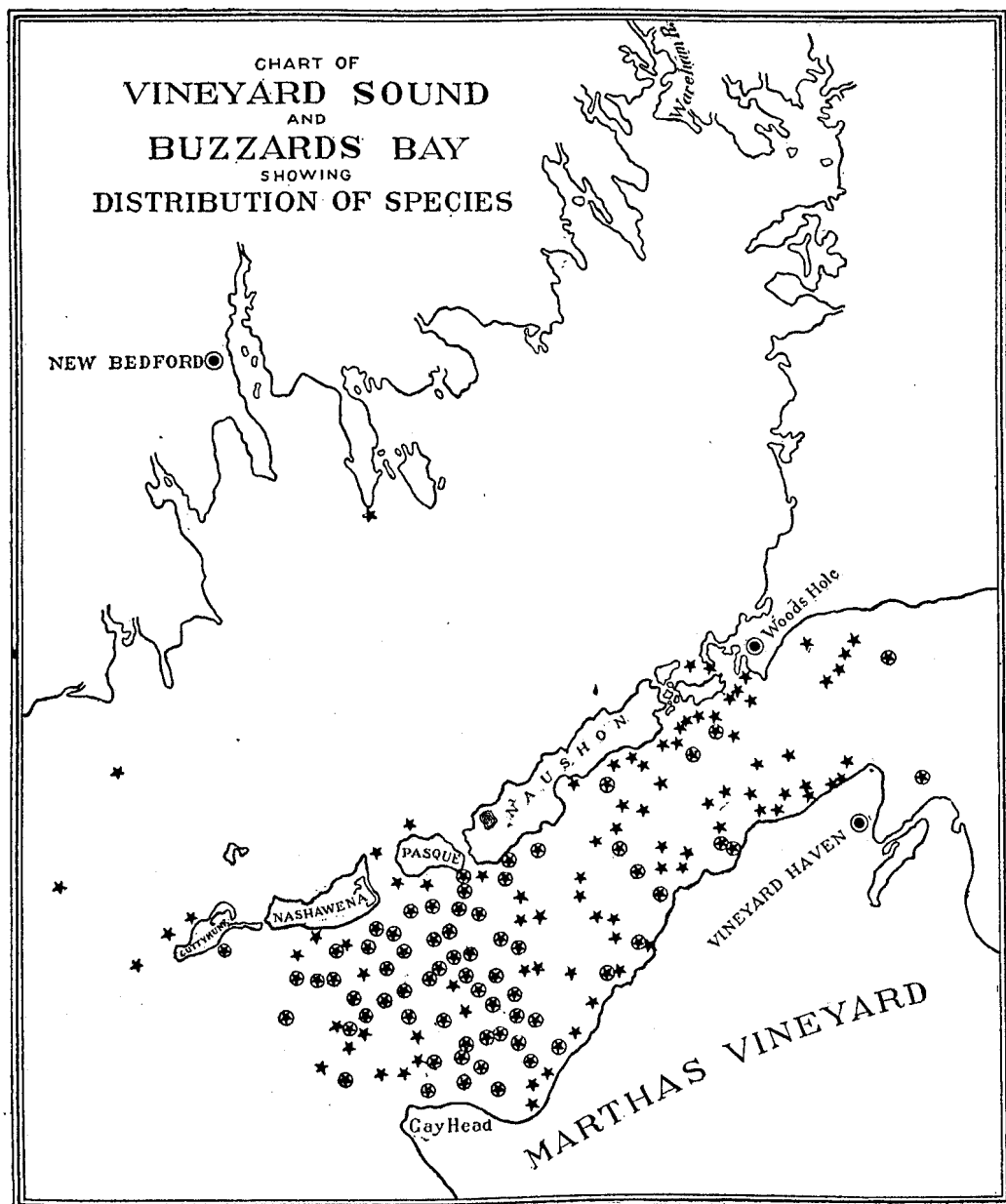
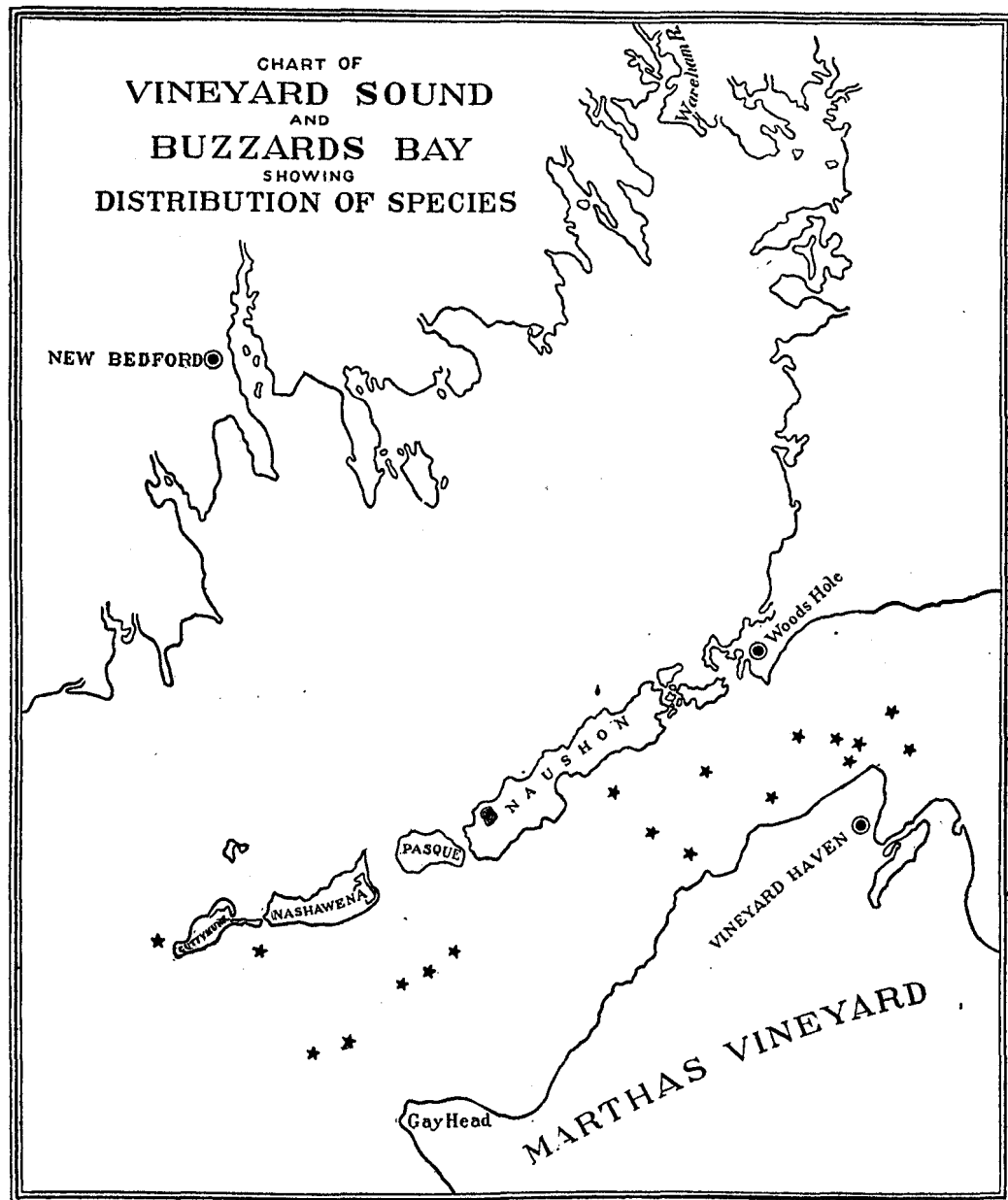
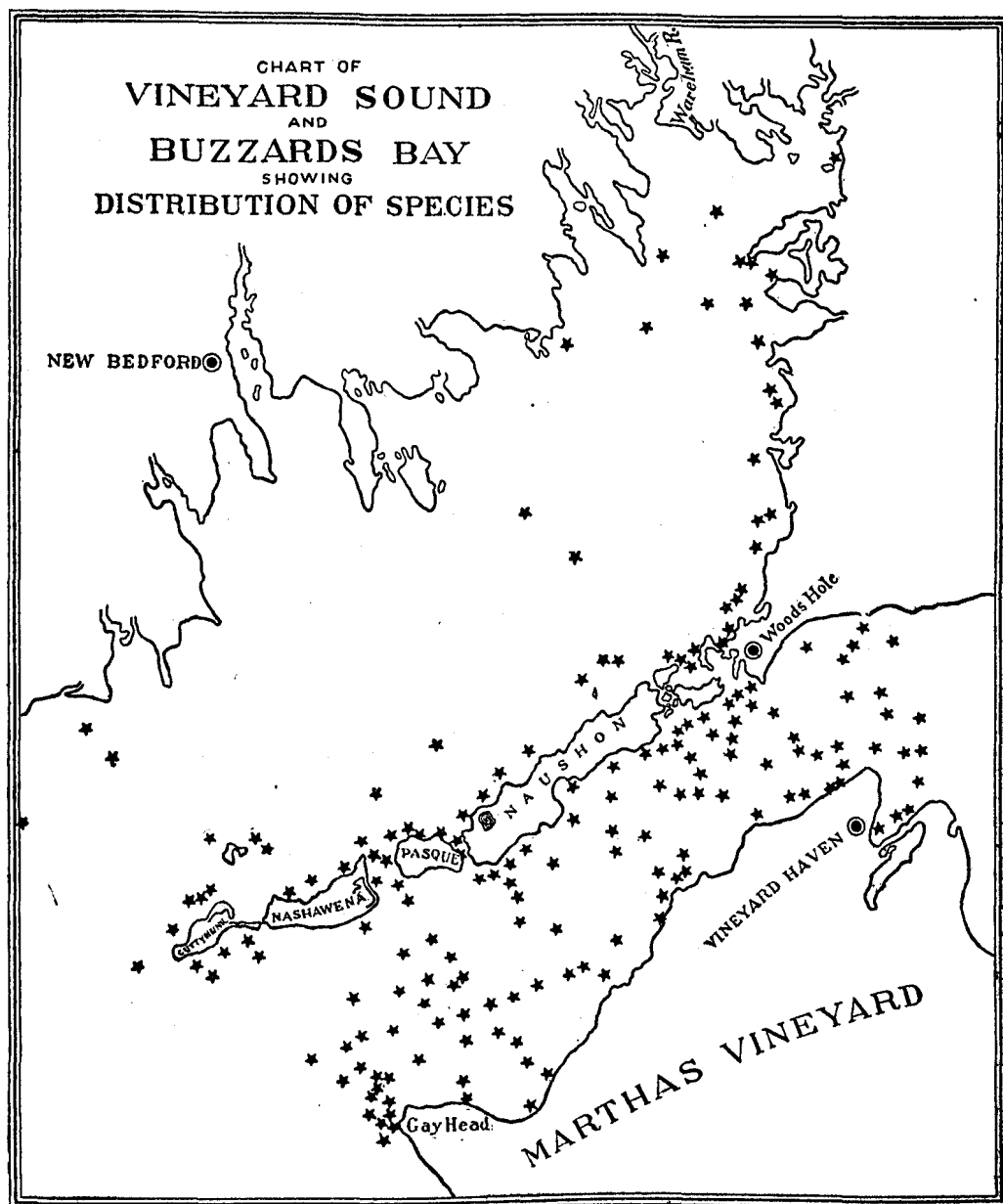
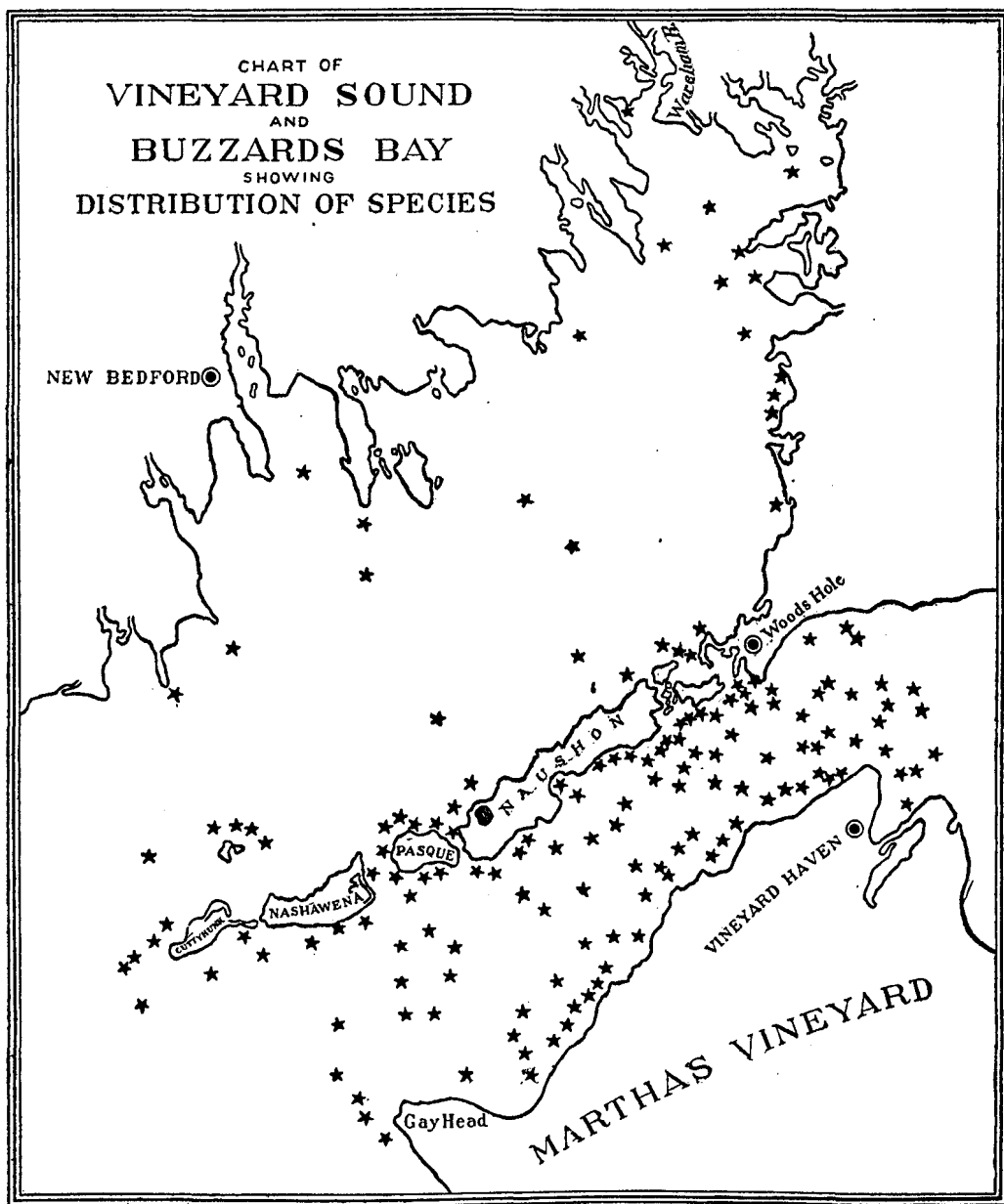


CHART 53.—*Echinarachnius parma*. (See explanation of chart 26.)

CHART 54.—*Eulalia annulata*.

CHART 55.—*Harmothoe imbricata*.

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CHART 56.—*Lepidonotus squamatus*.



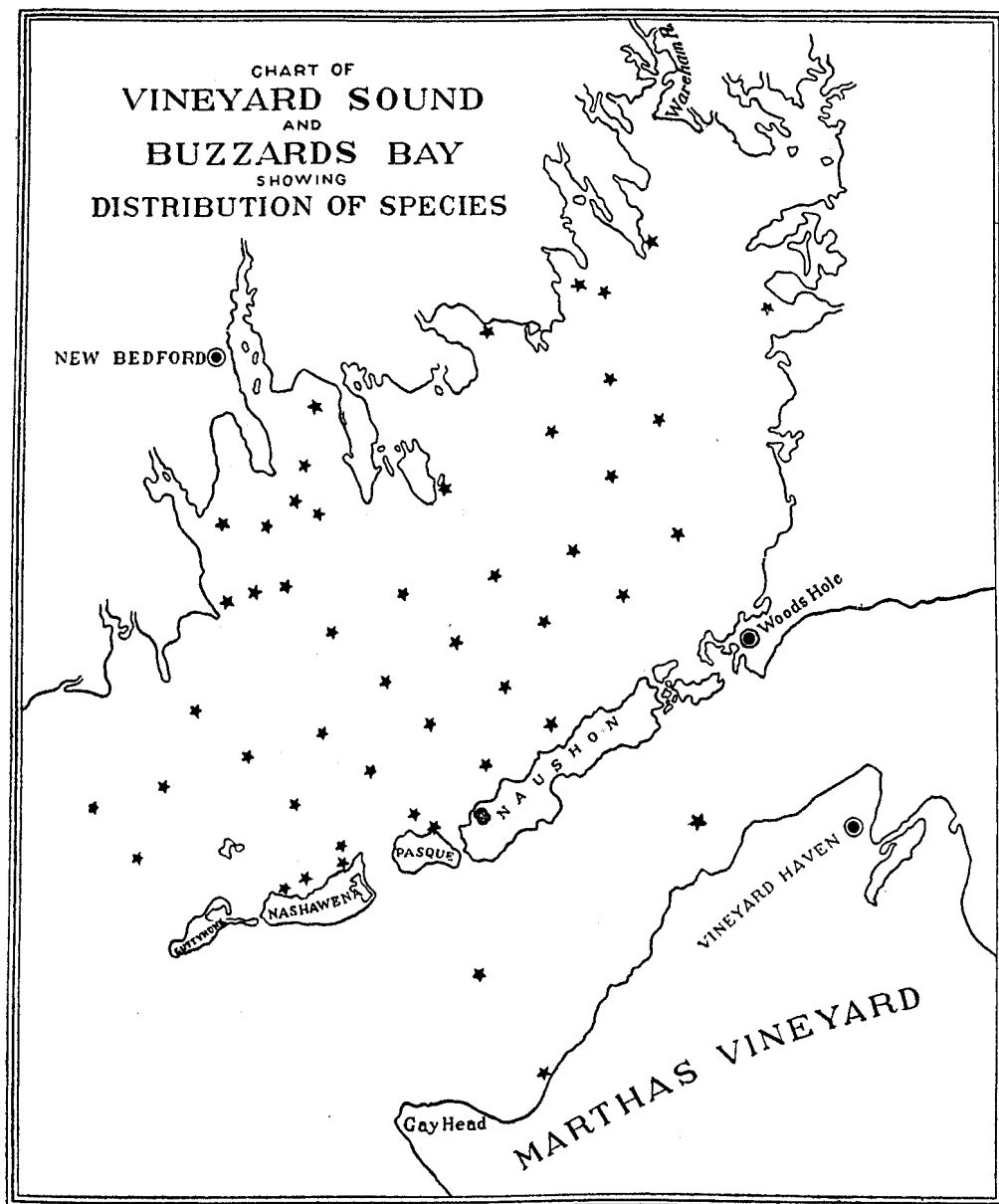
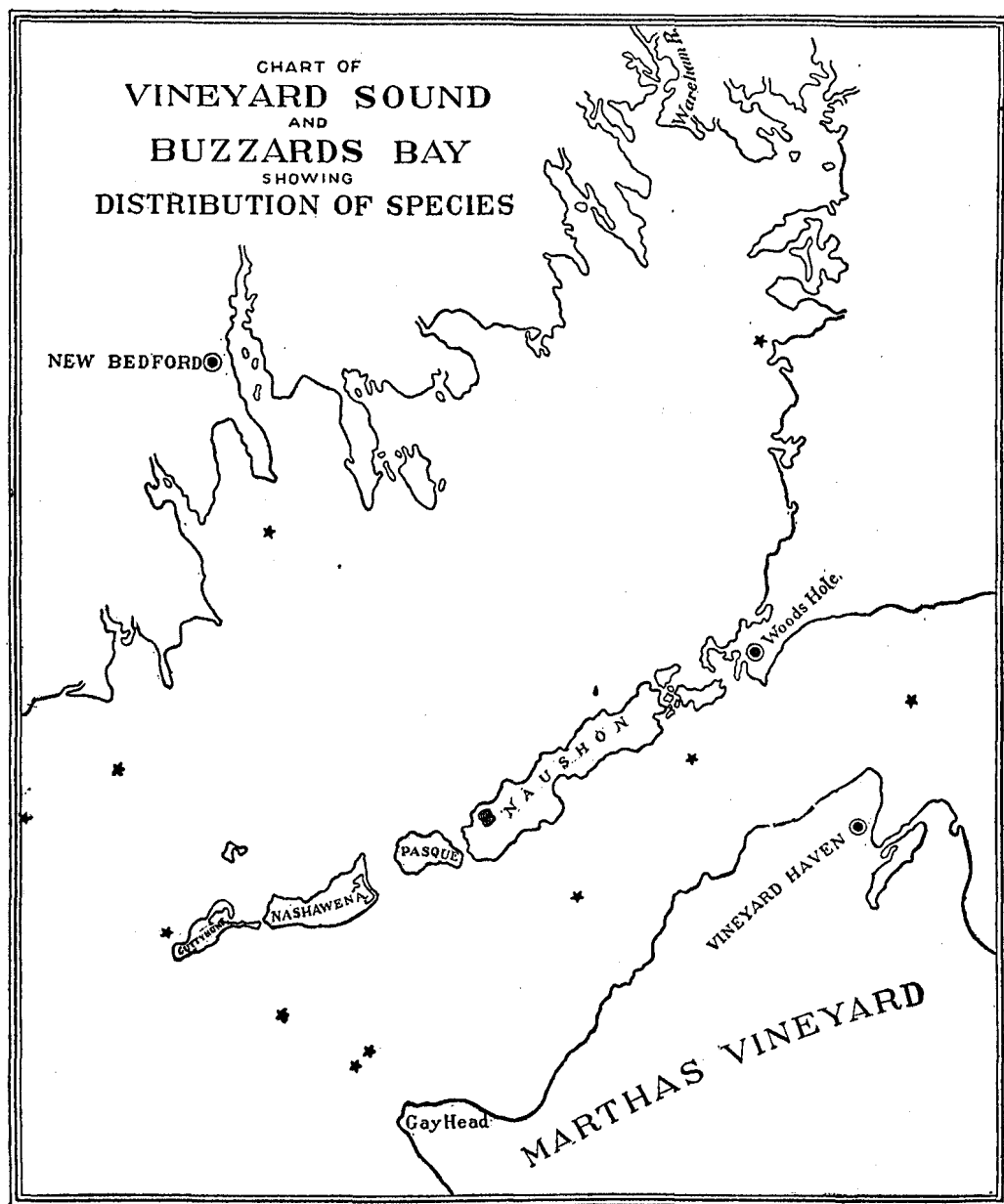
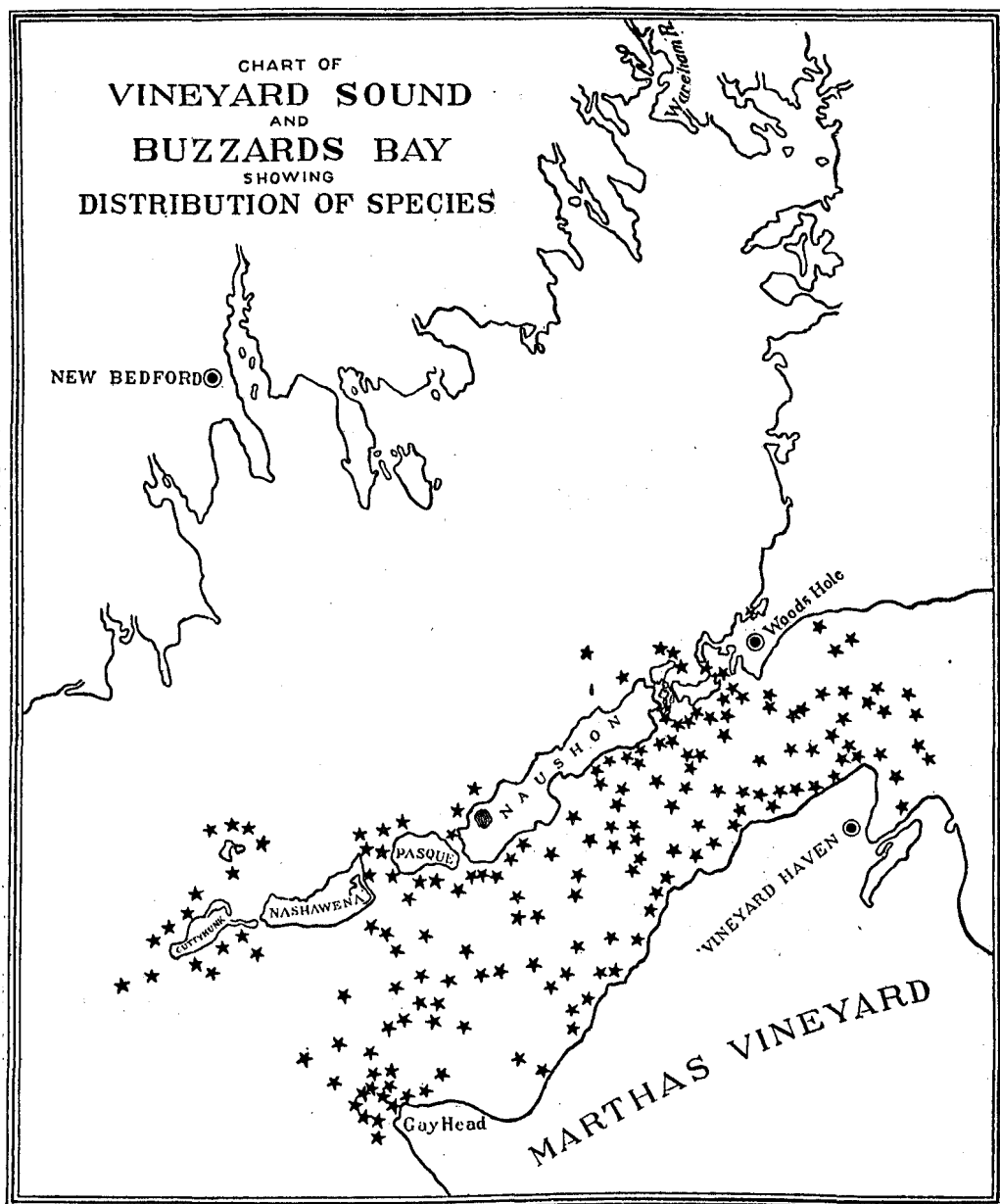
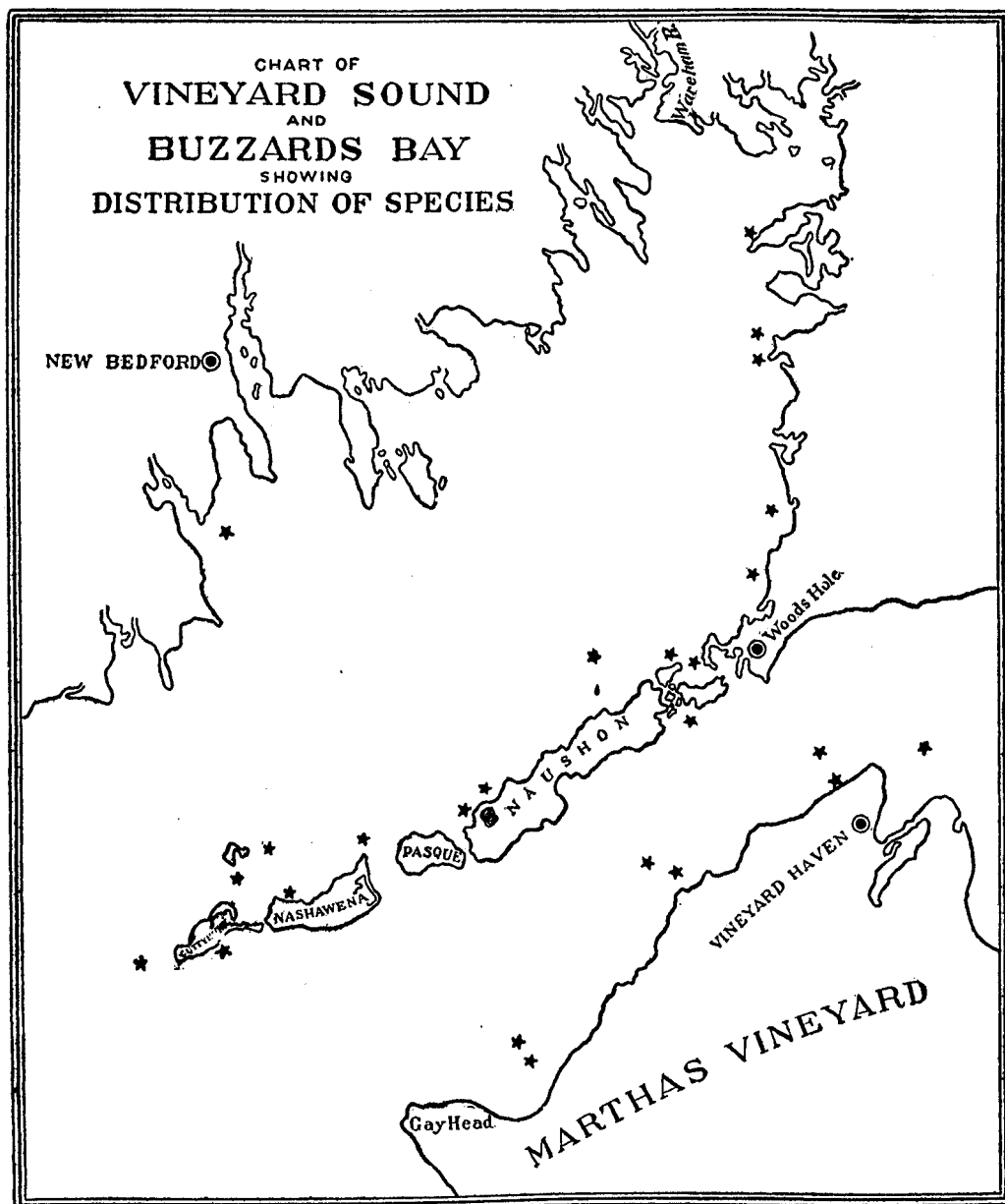
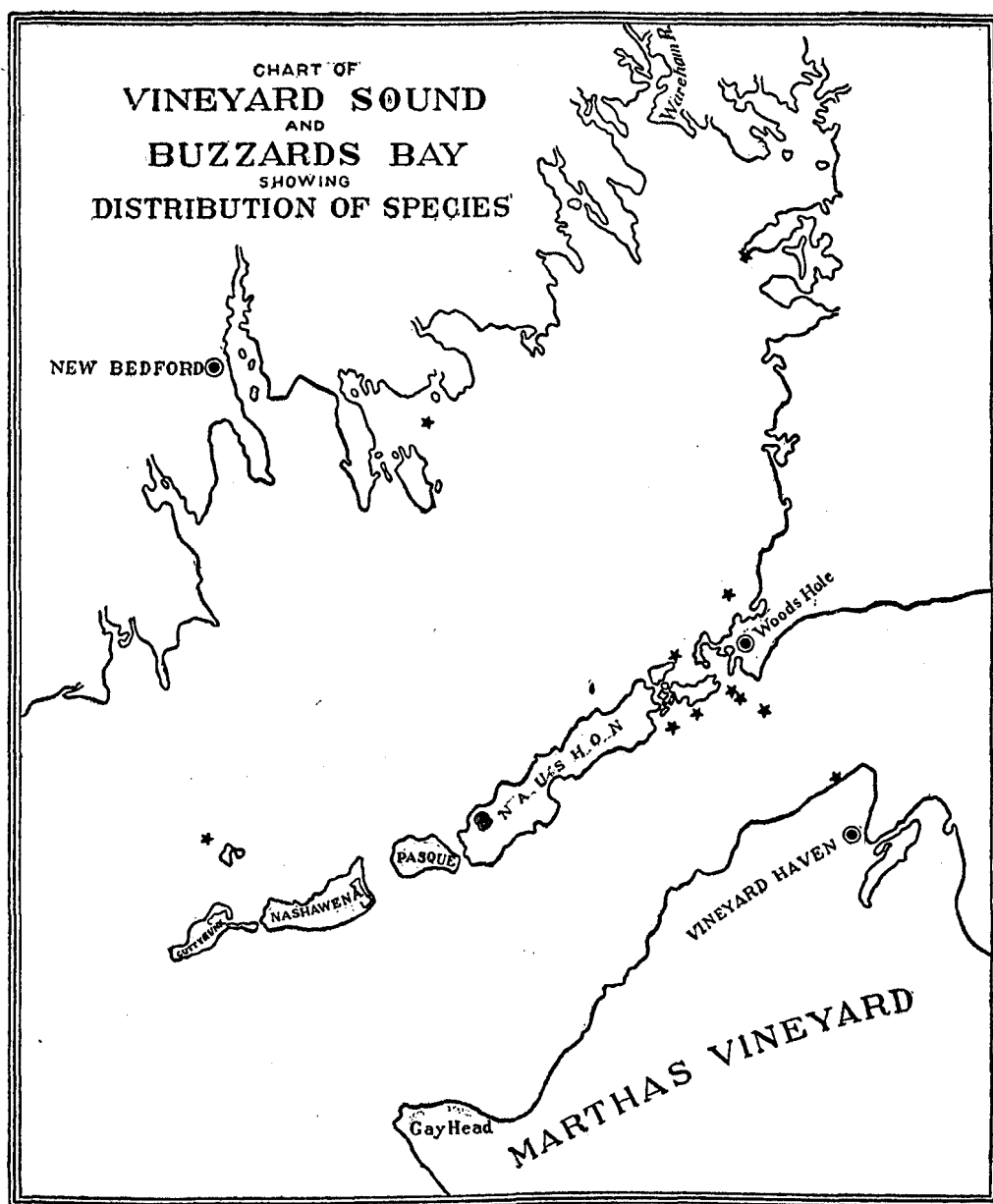


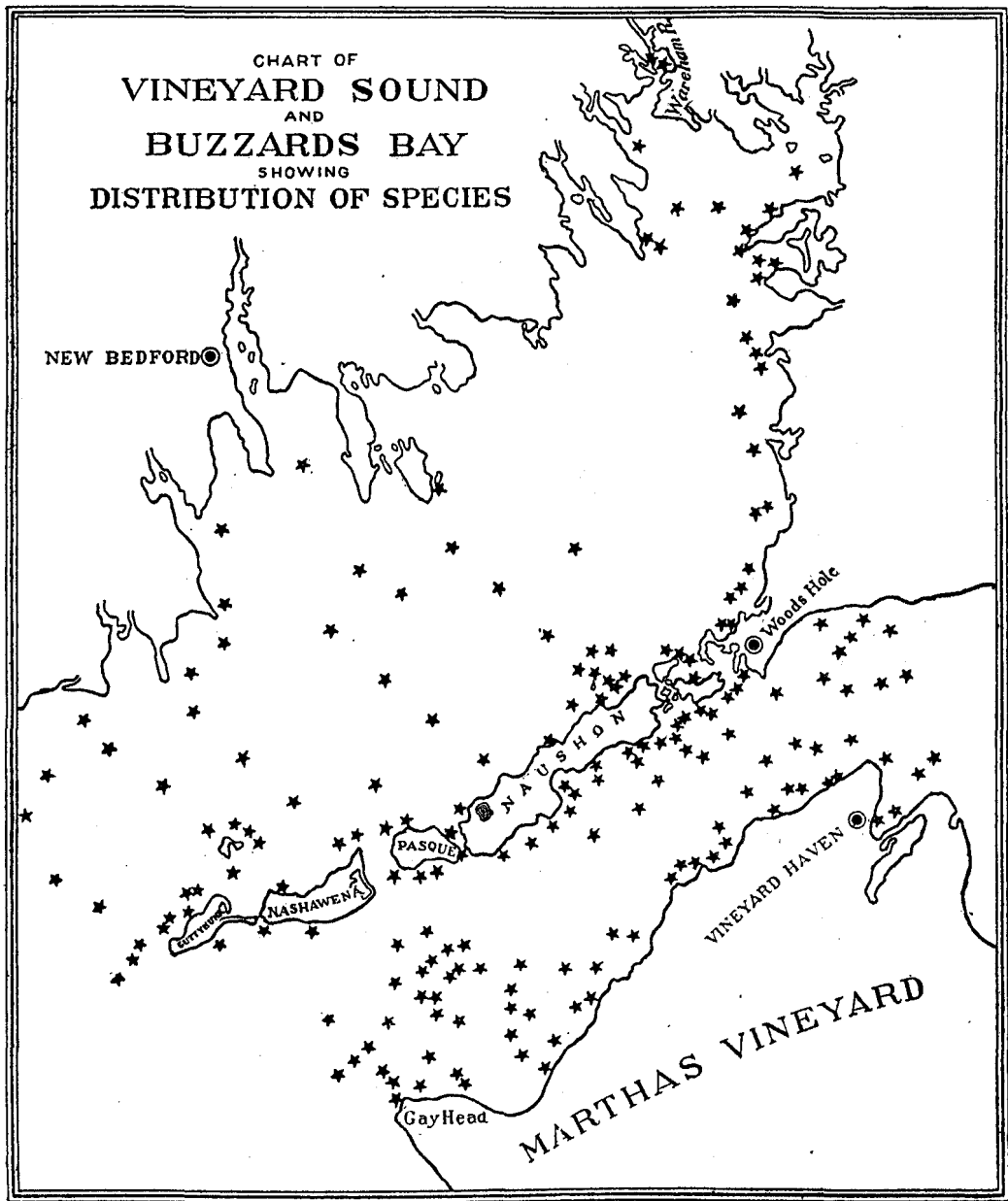
CHART 57.—*Nephtys incisa*.

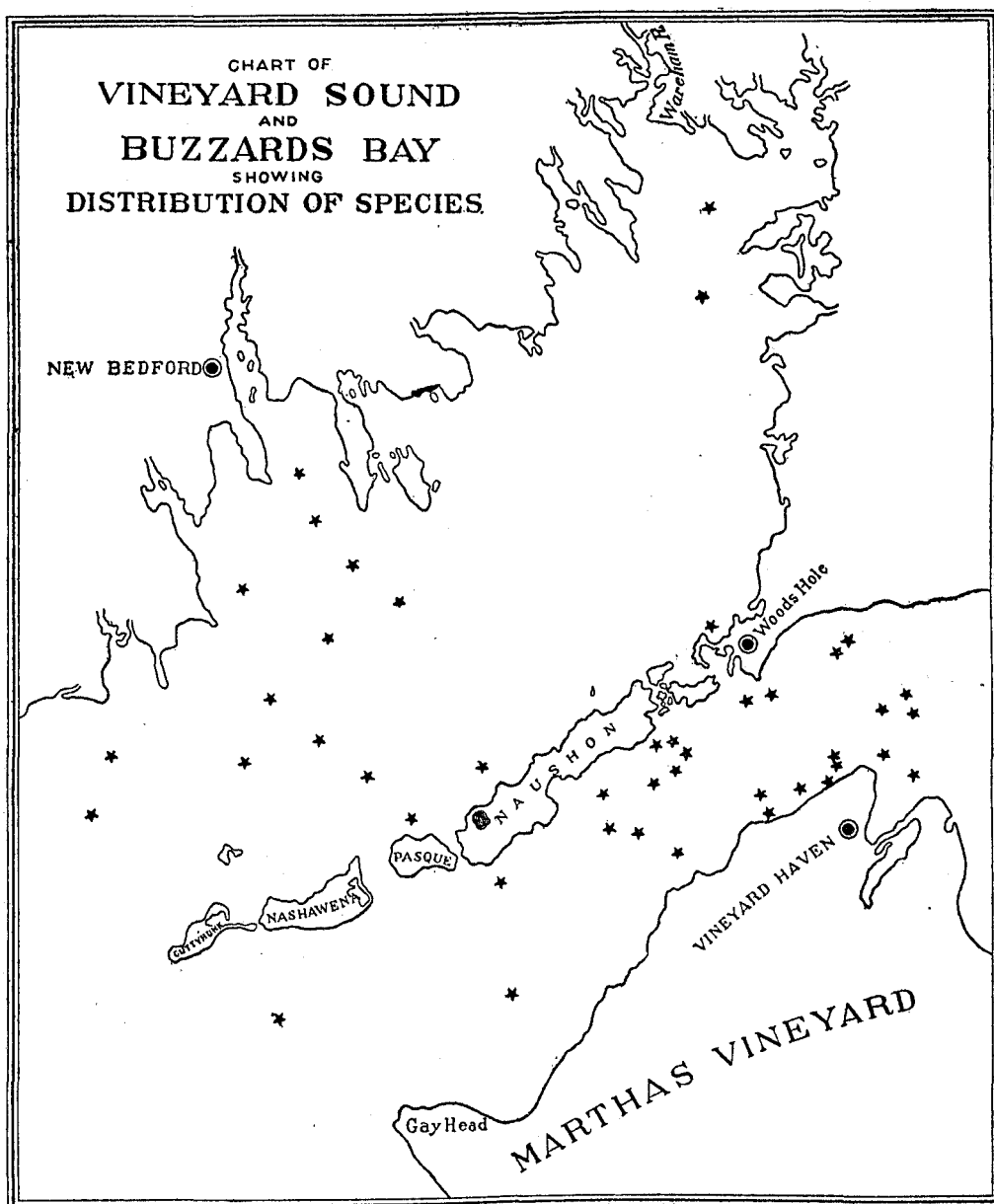
CHART 58.—*Nephthys buccera*.

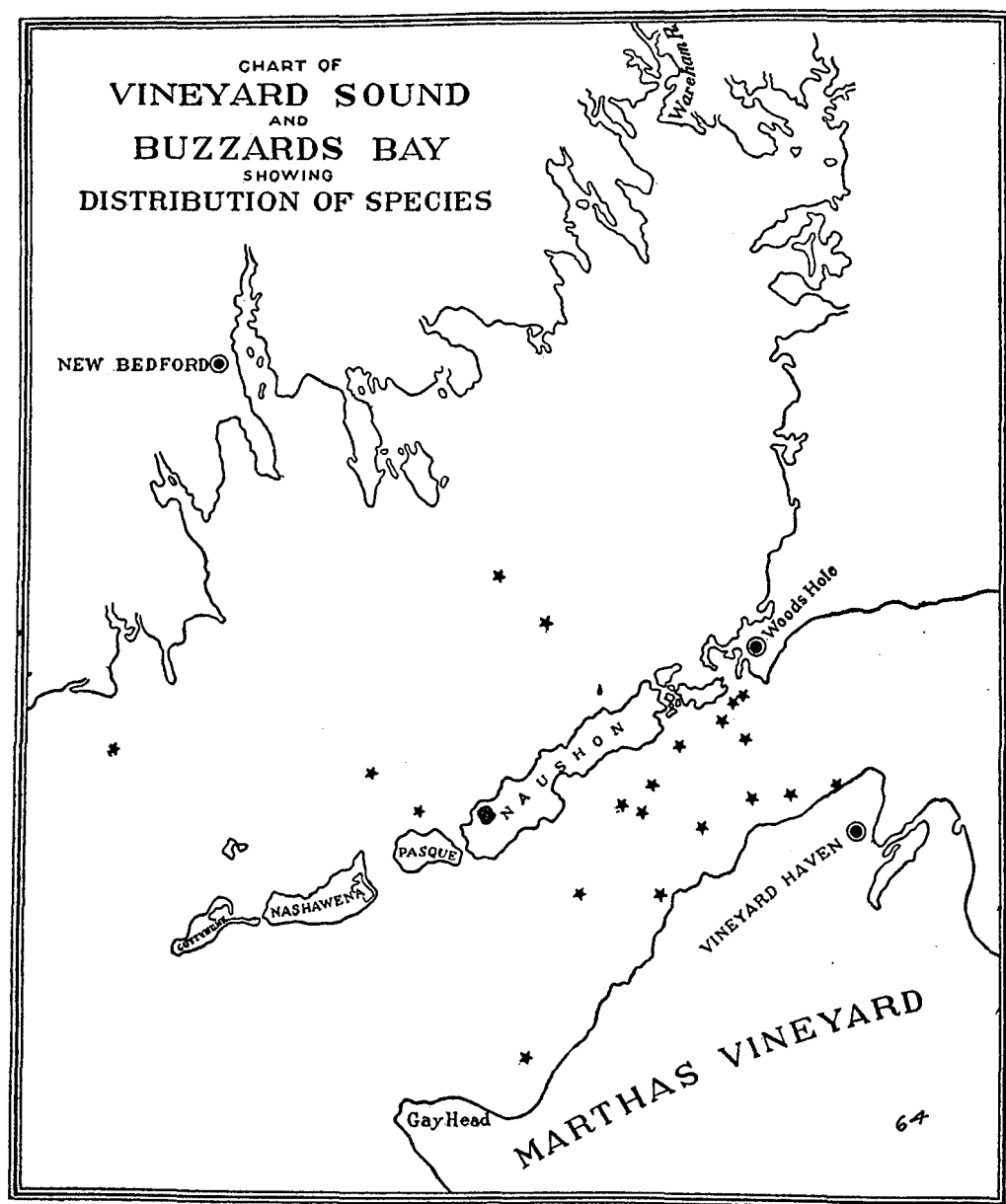
CHART 59.—*Nereis pelagica*.

CHART 60.—*Platynereis megalops*.

CHART 61.—*Marphysa leidyi*.

CHART 62.—*Diopatra cuprea* (tubes only).

CHART 63.—*Arabella opalina*.

CHART 64.—*Lumbrineris hebes*.



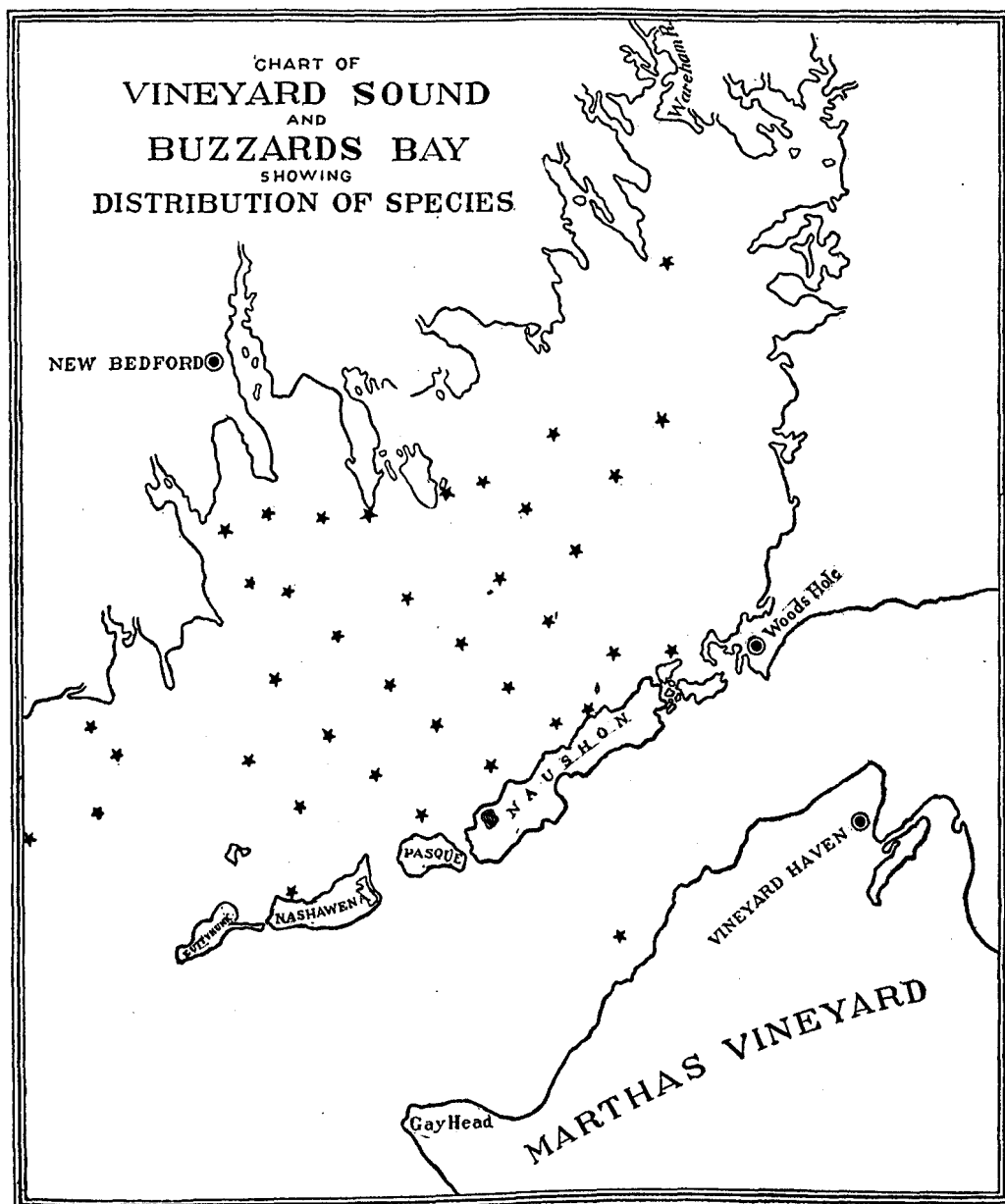
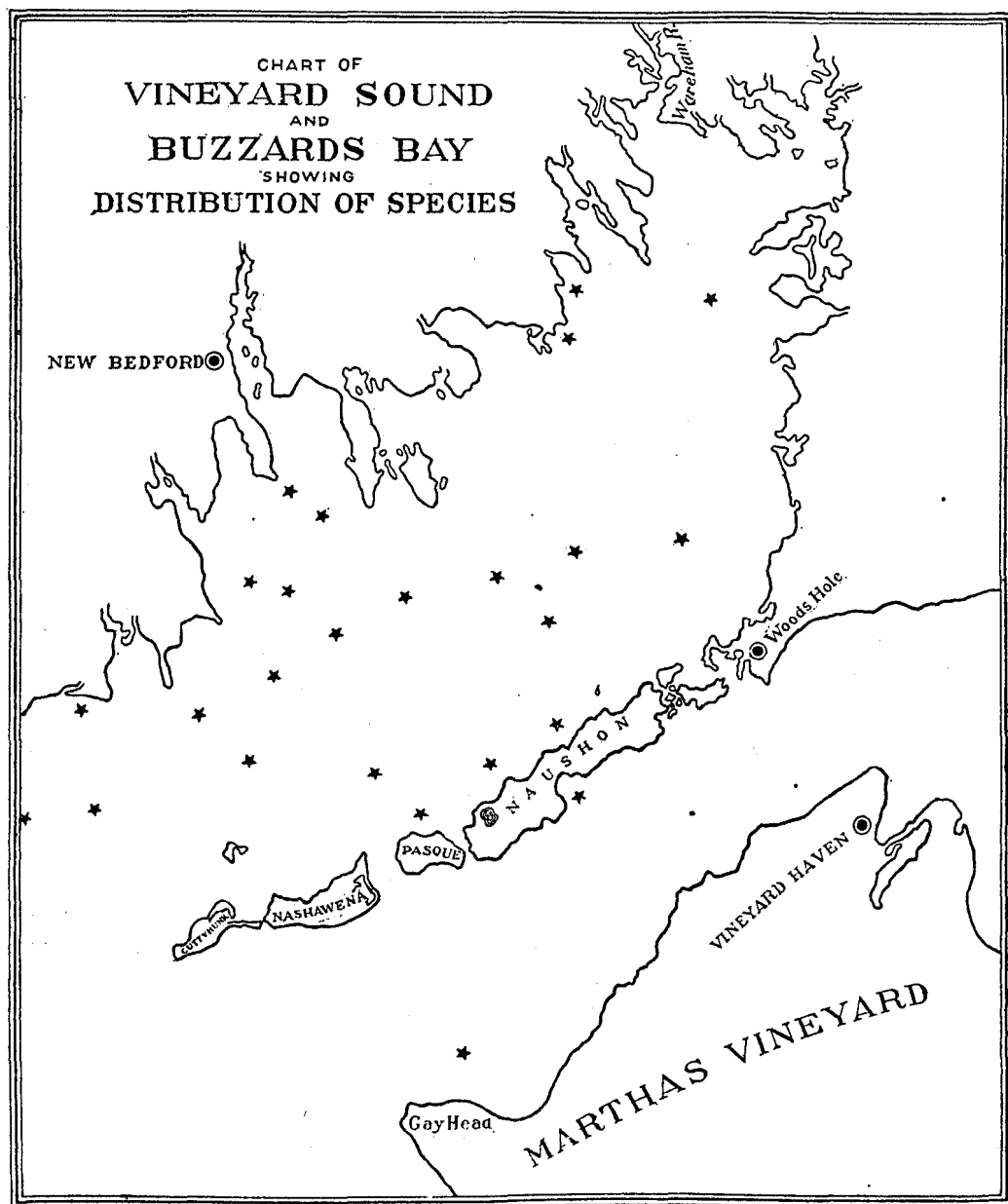
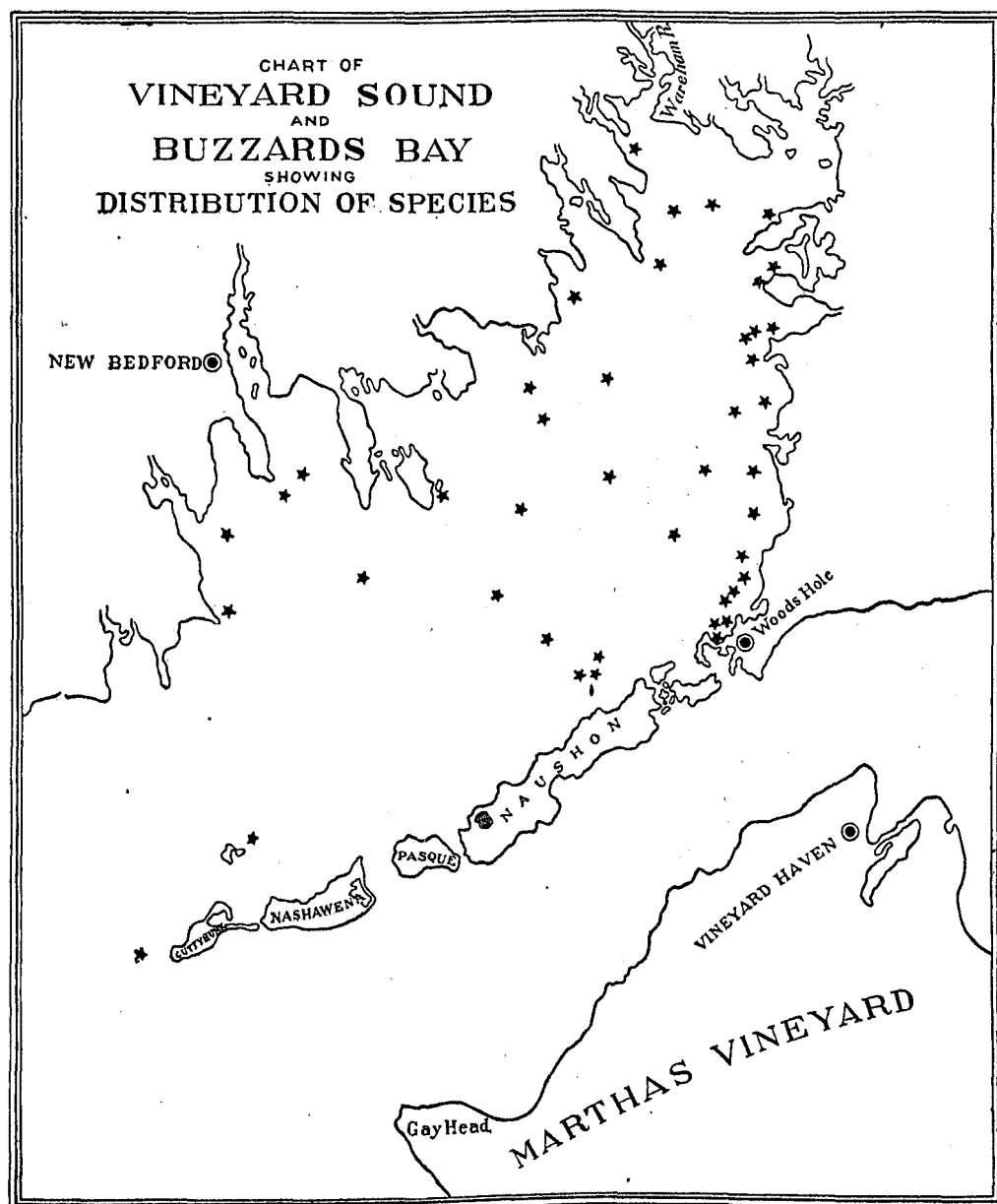
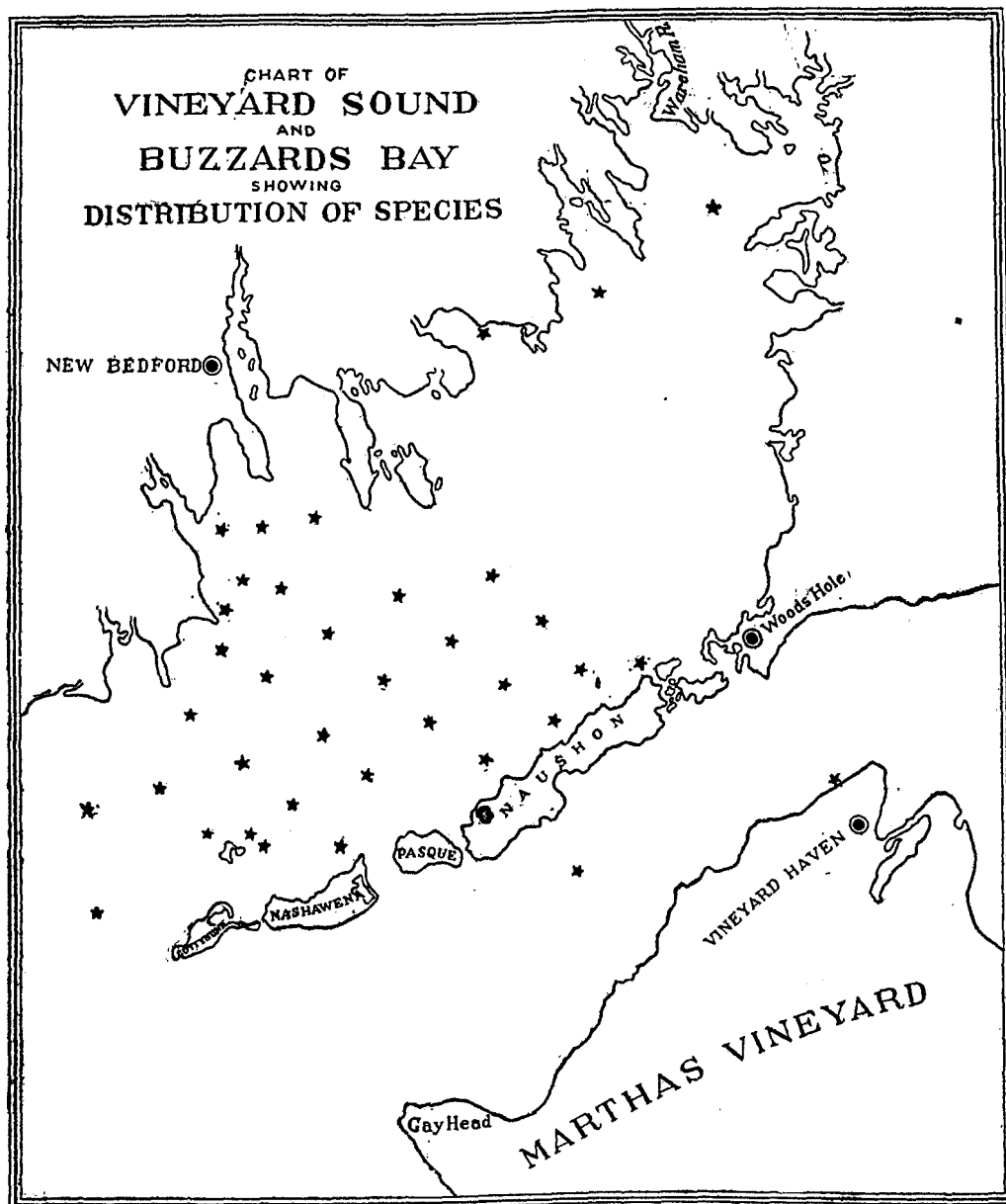
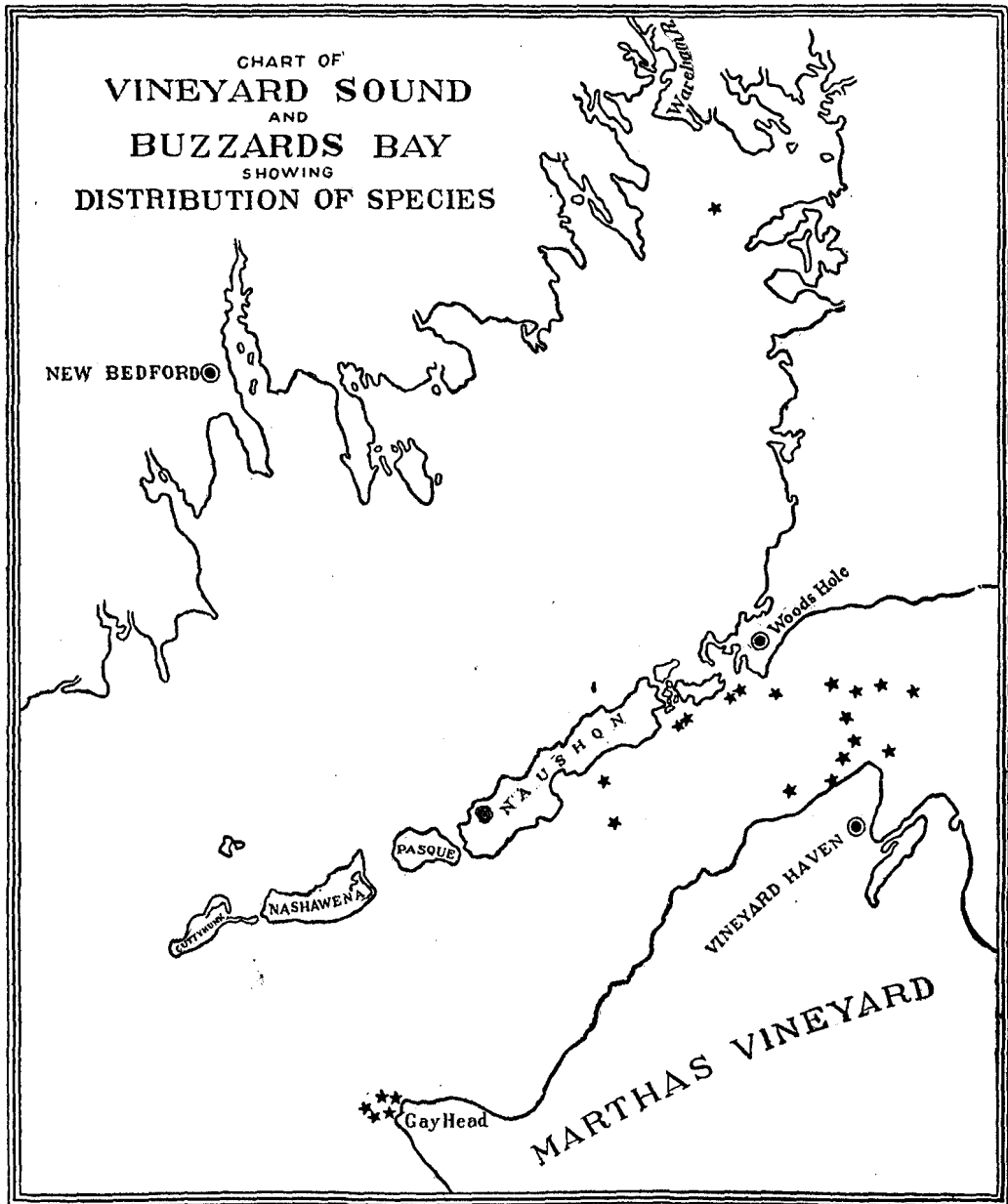


CHART 65.—*Ninoë nigripes*.

CHART 66.—*Rhynchobolus americanus*.

CHART 67.—*Chaetopterus pergamentaceus* (tubes only).

CHART 68.—*Spiochaetopterus oculatus*.

CHART 69.—*Lepræa rubra*.

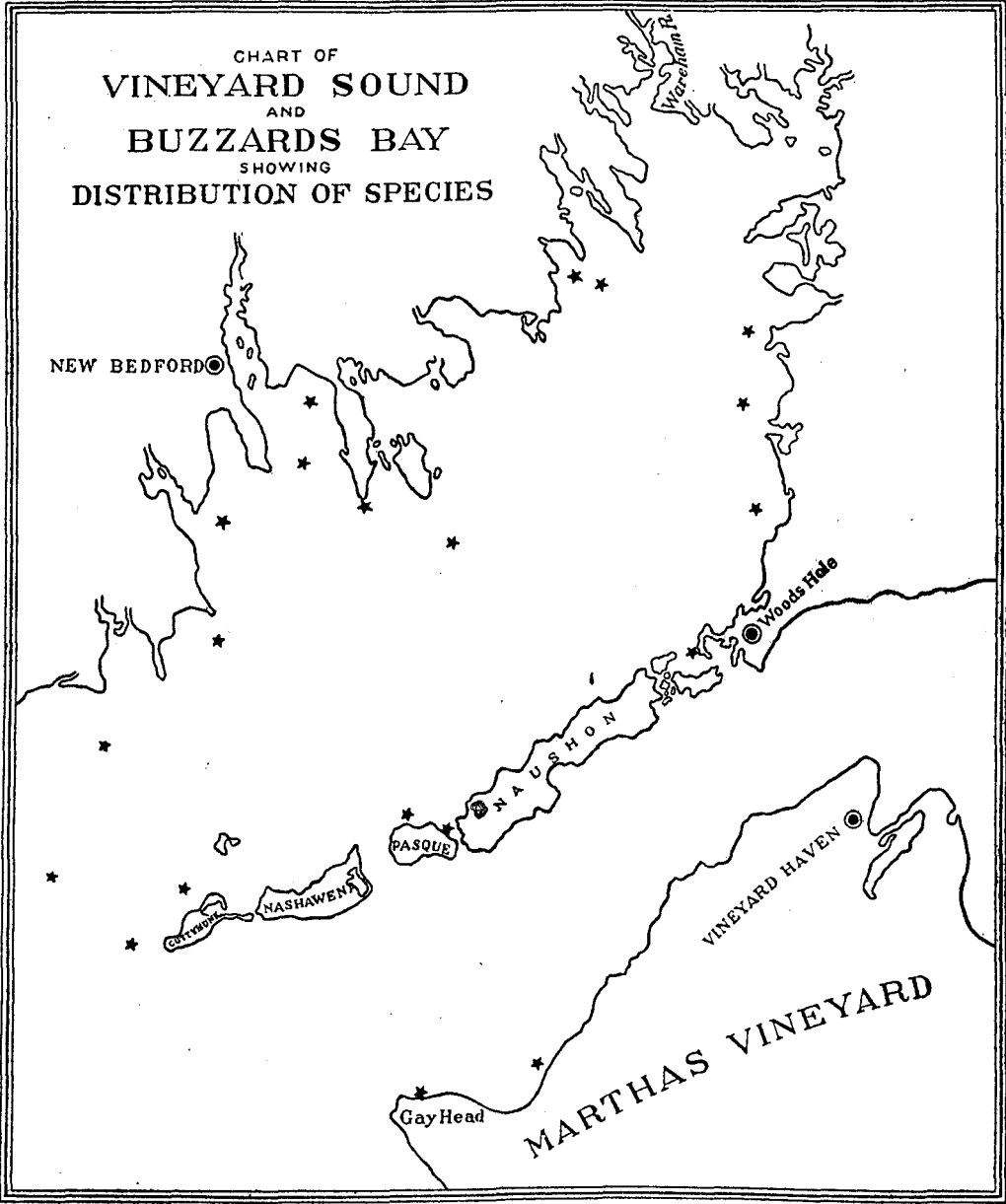
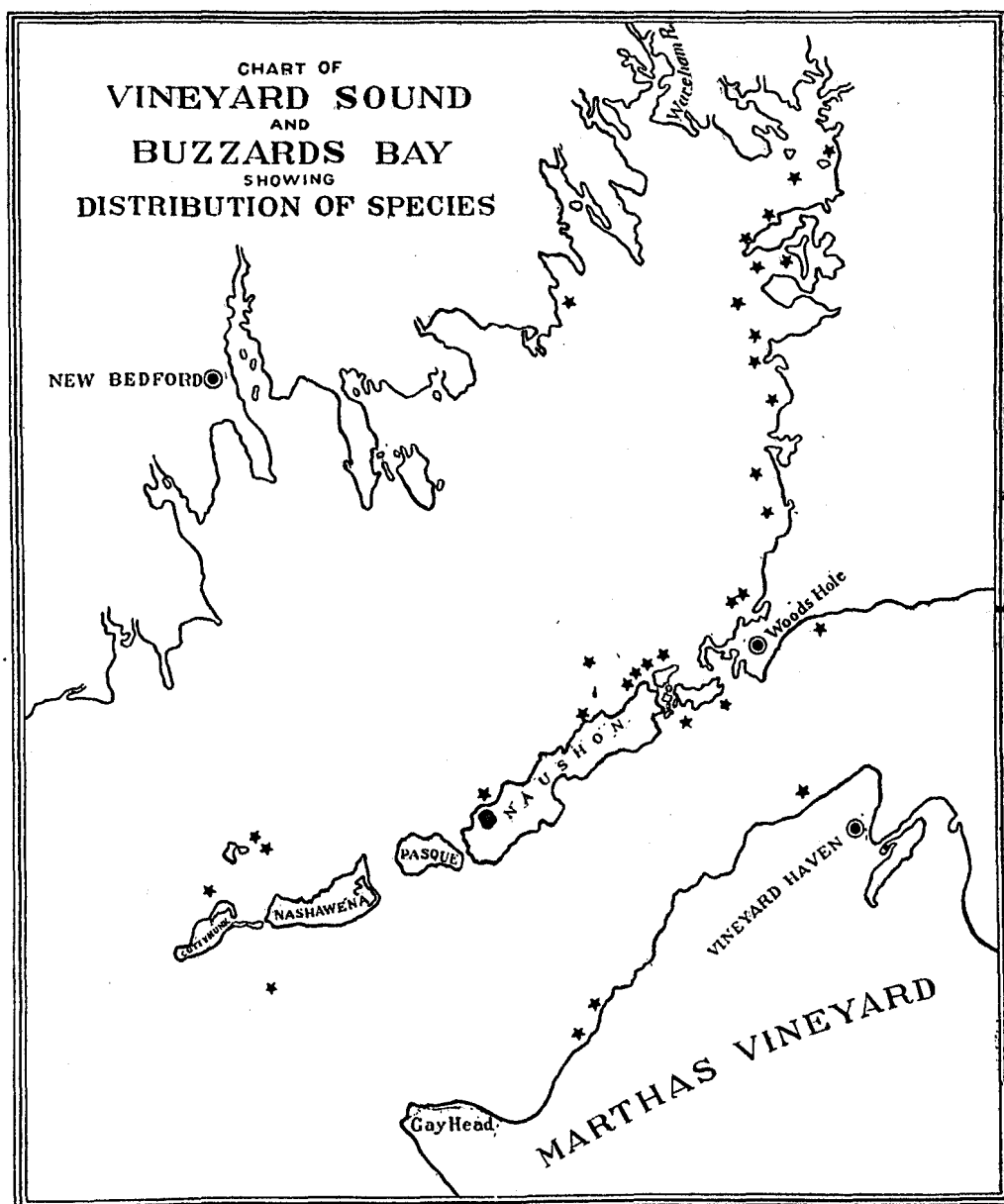
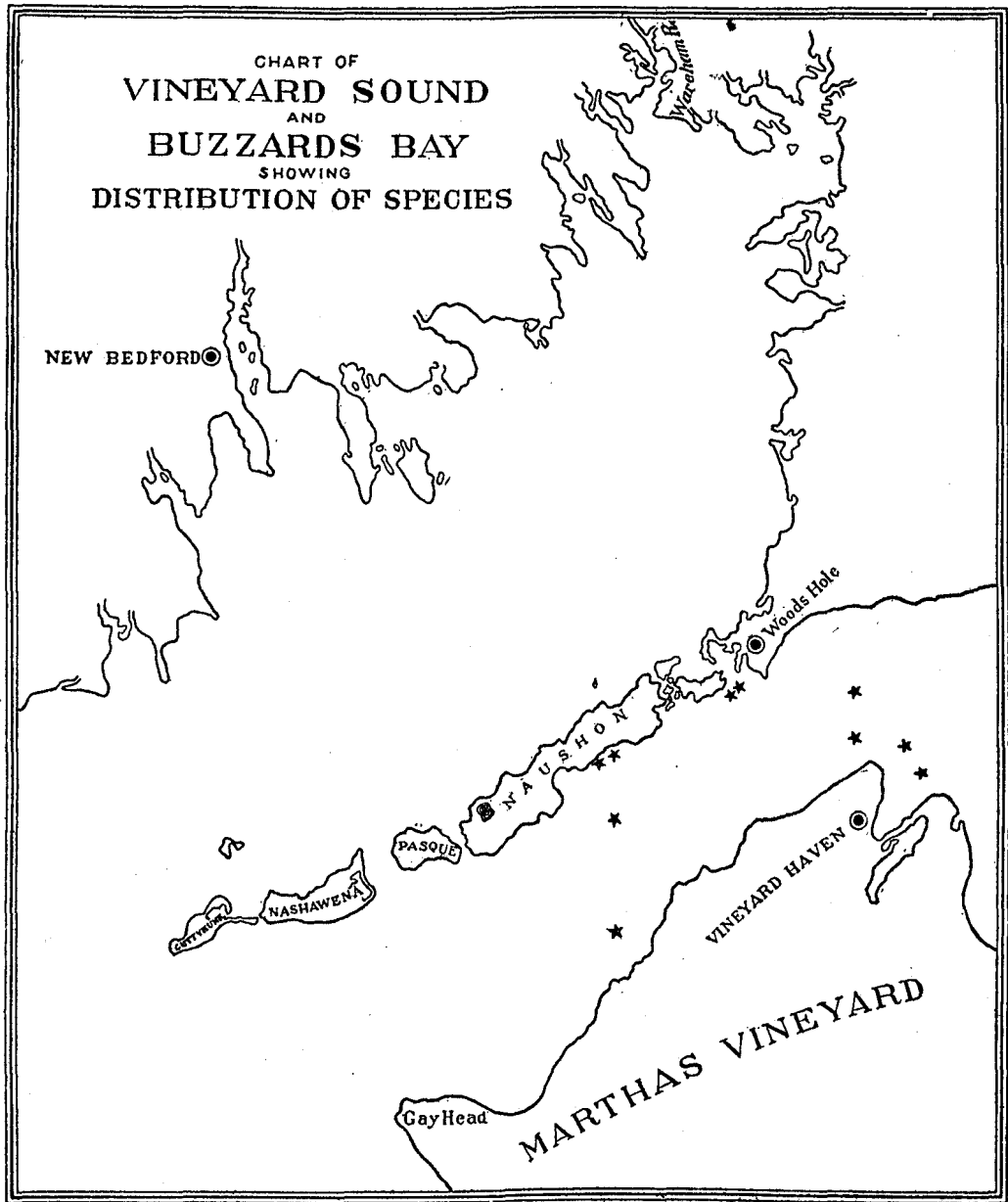


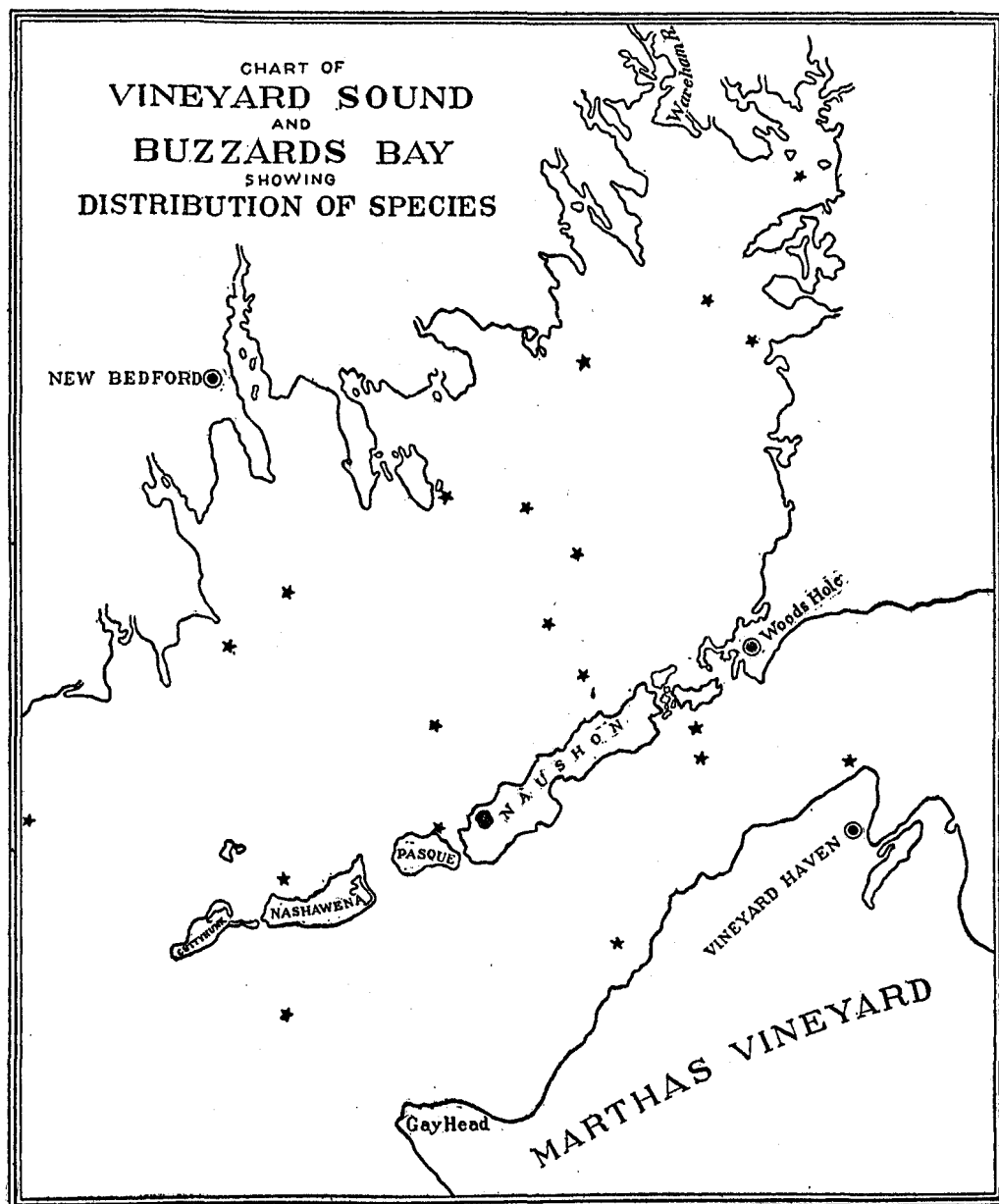
CHART 70.—*Pista intermedia*.

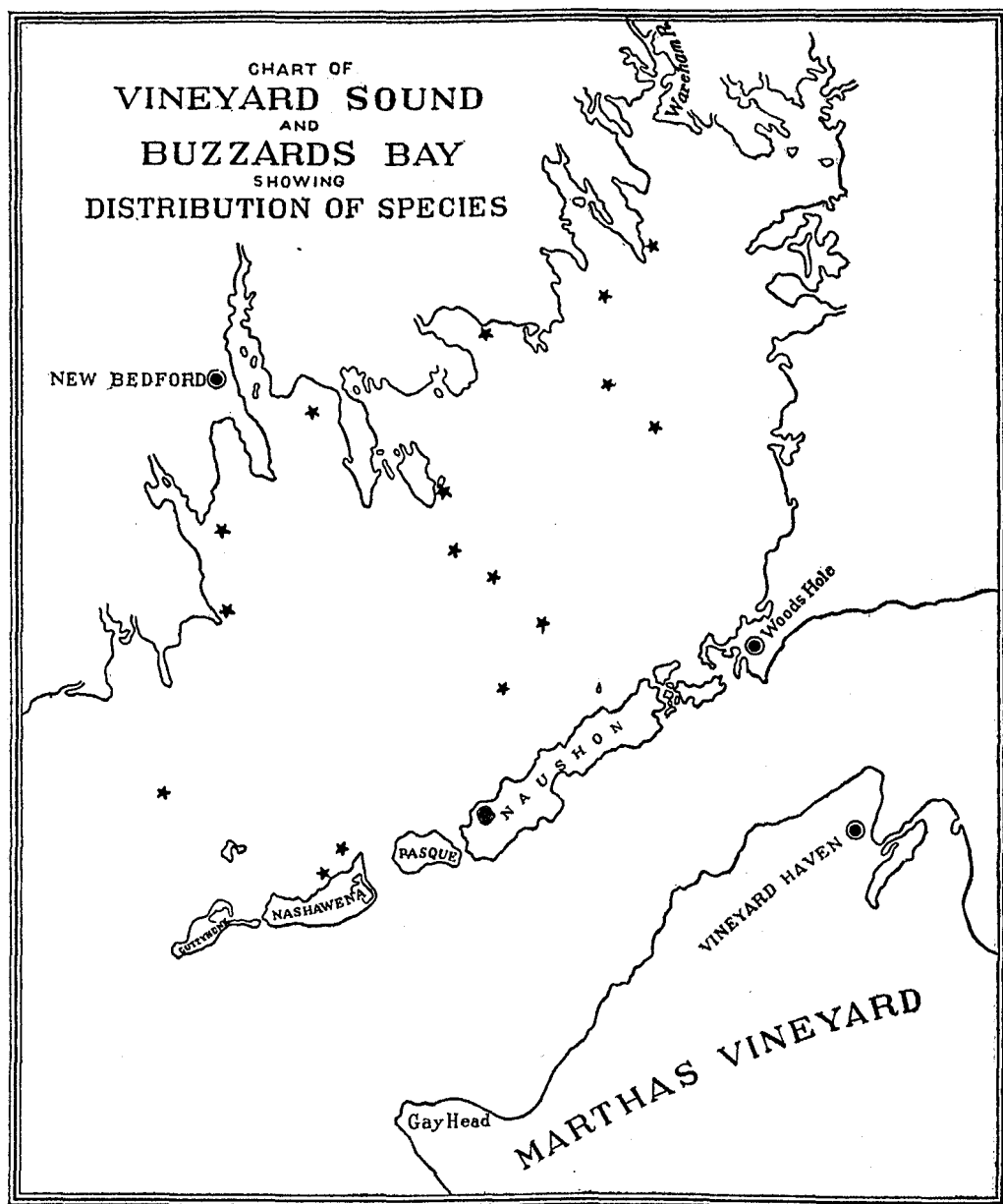
CHART 71.—*Pista palmata*.

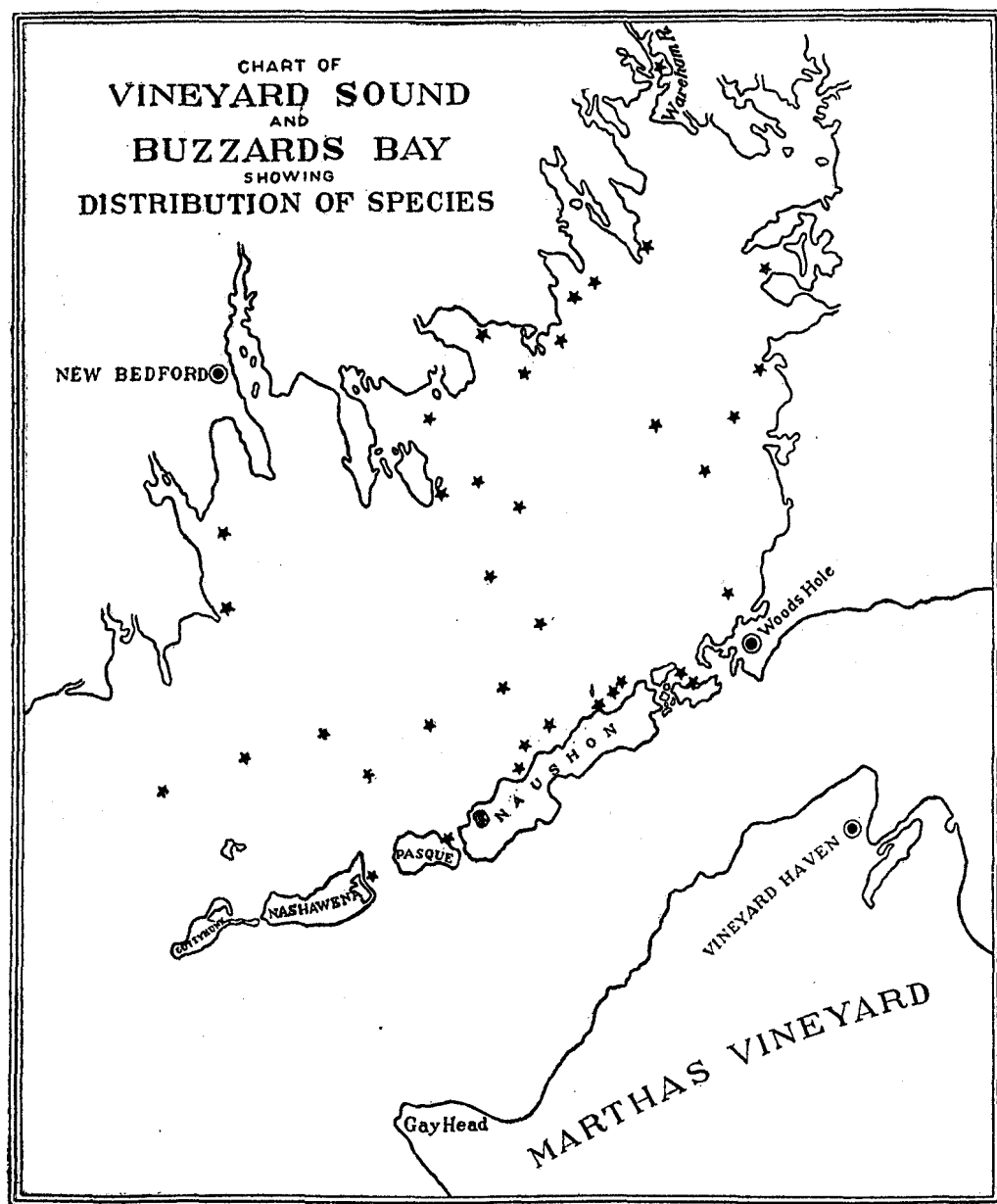
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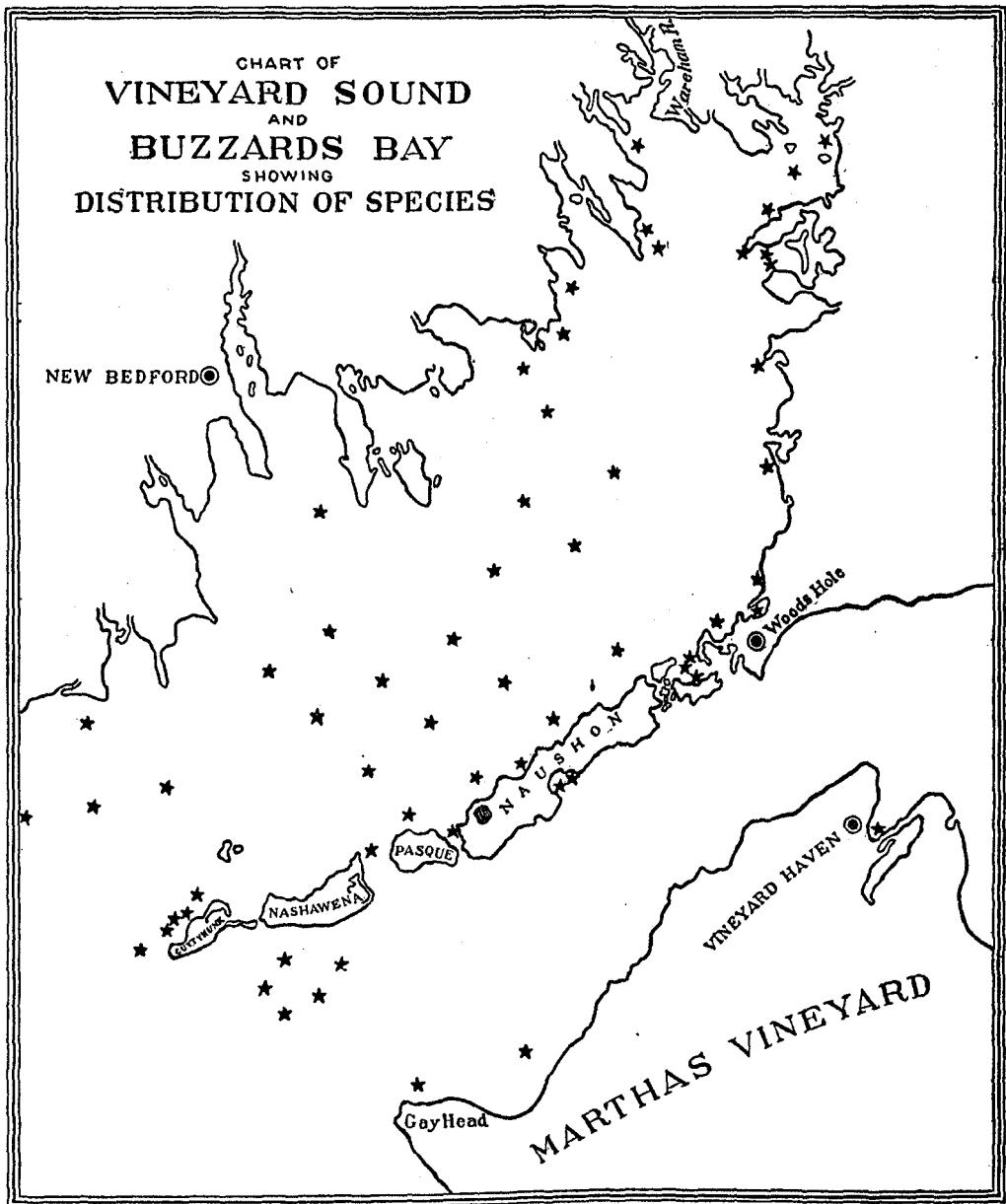
CHART 72.—*Polycirrus eximeus*.

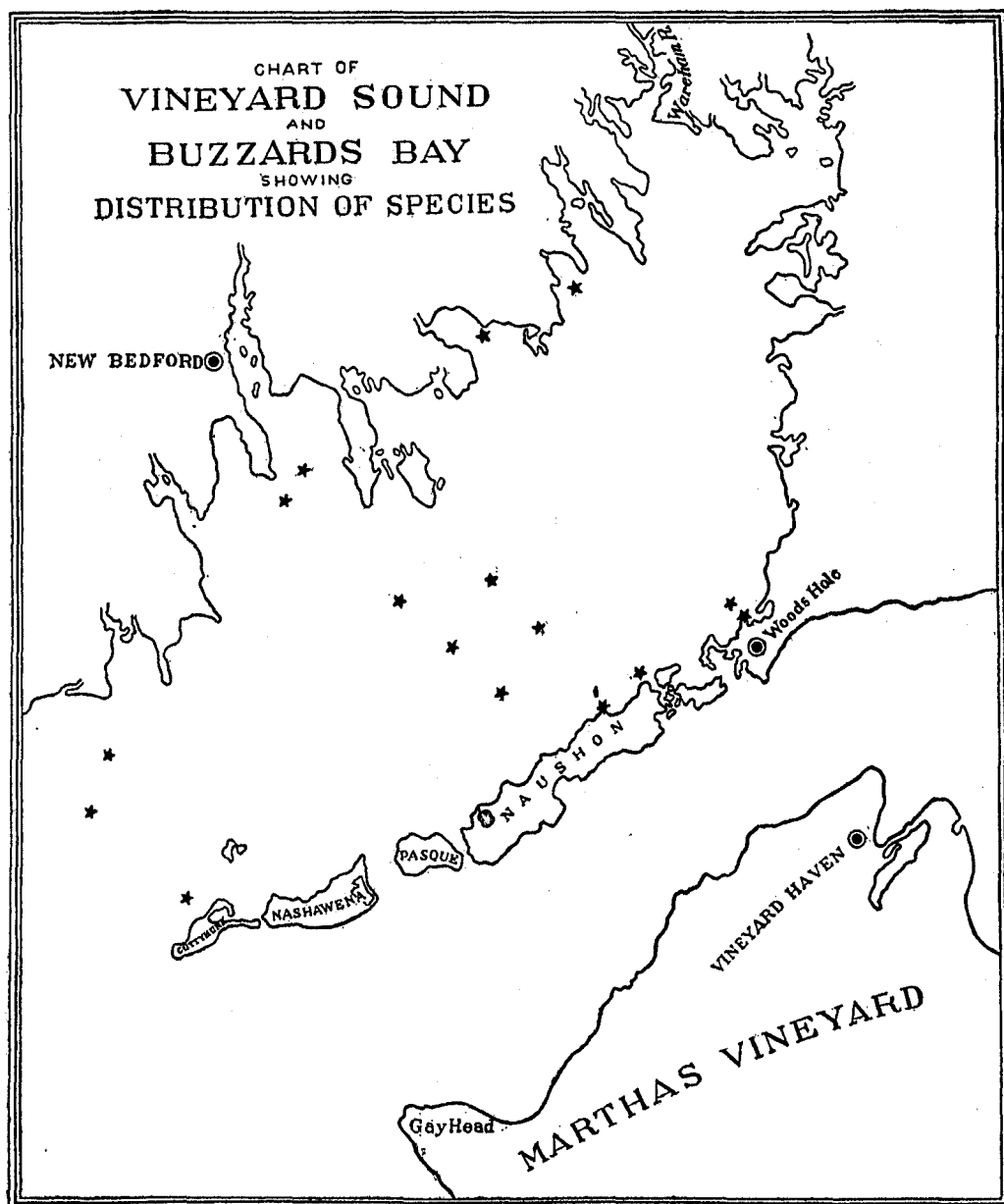


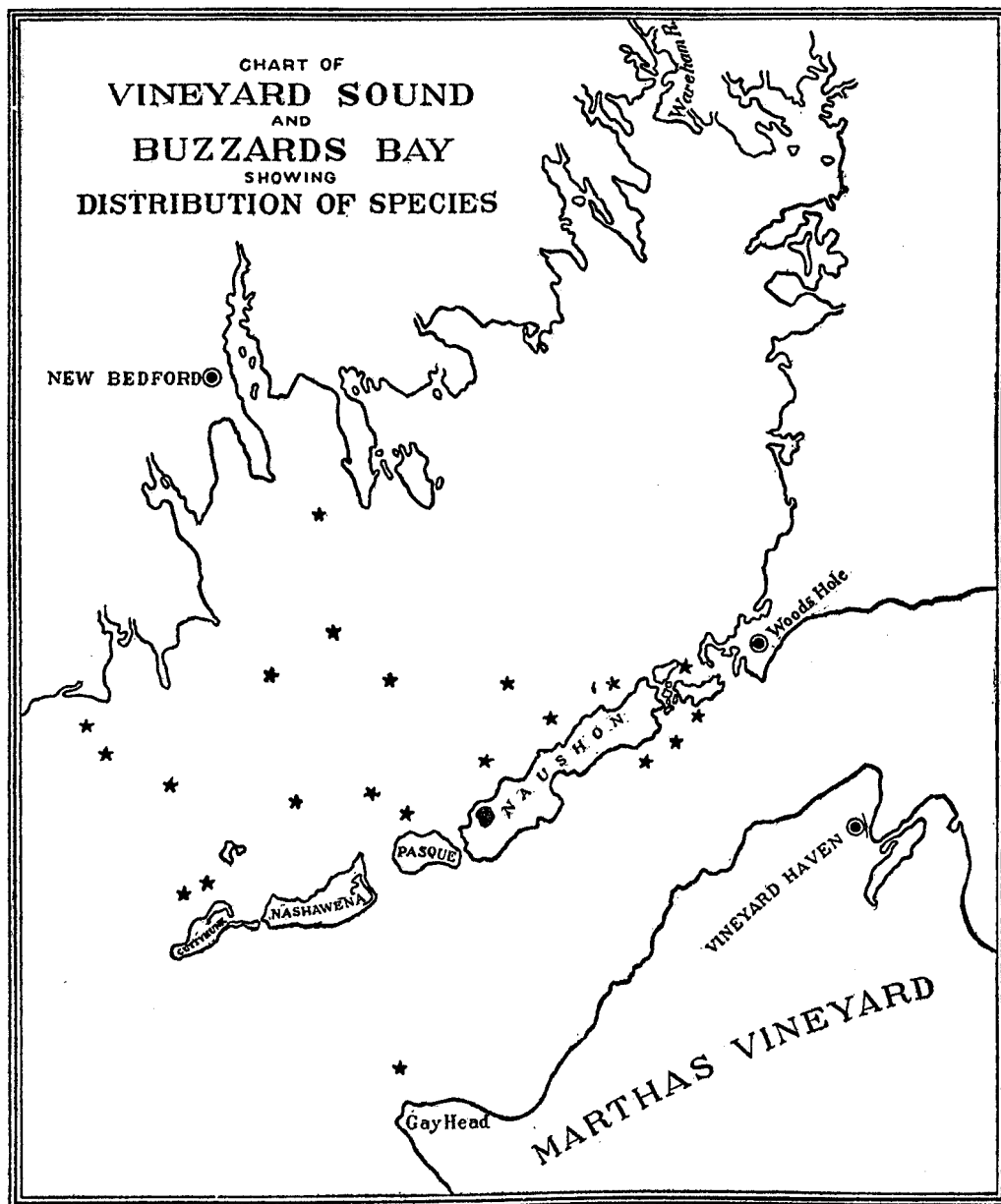
CHART 73.—*Ampharete setosa*.

CHART 74.—*Melinna maculata*.

CHART 75.—*Cistenides gouldii*.

CHART 76.—*Clymenella torquata*.

CHART 77.—*Maldane elongata*.



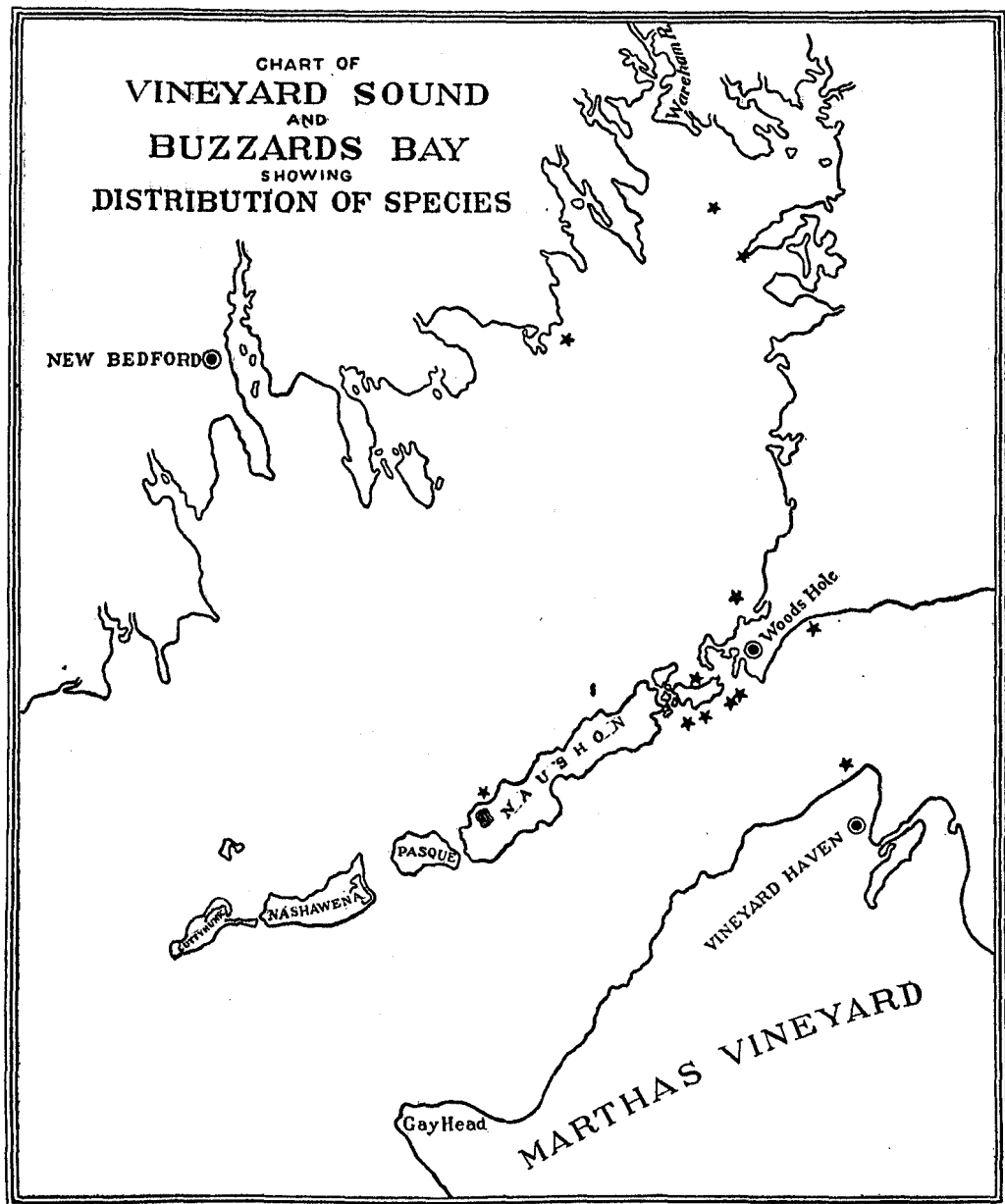
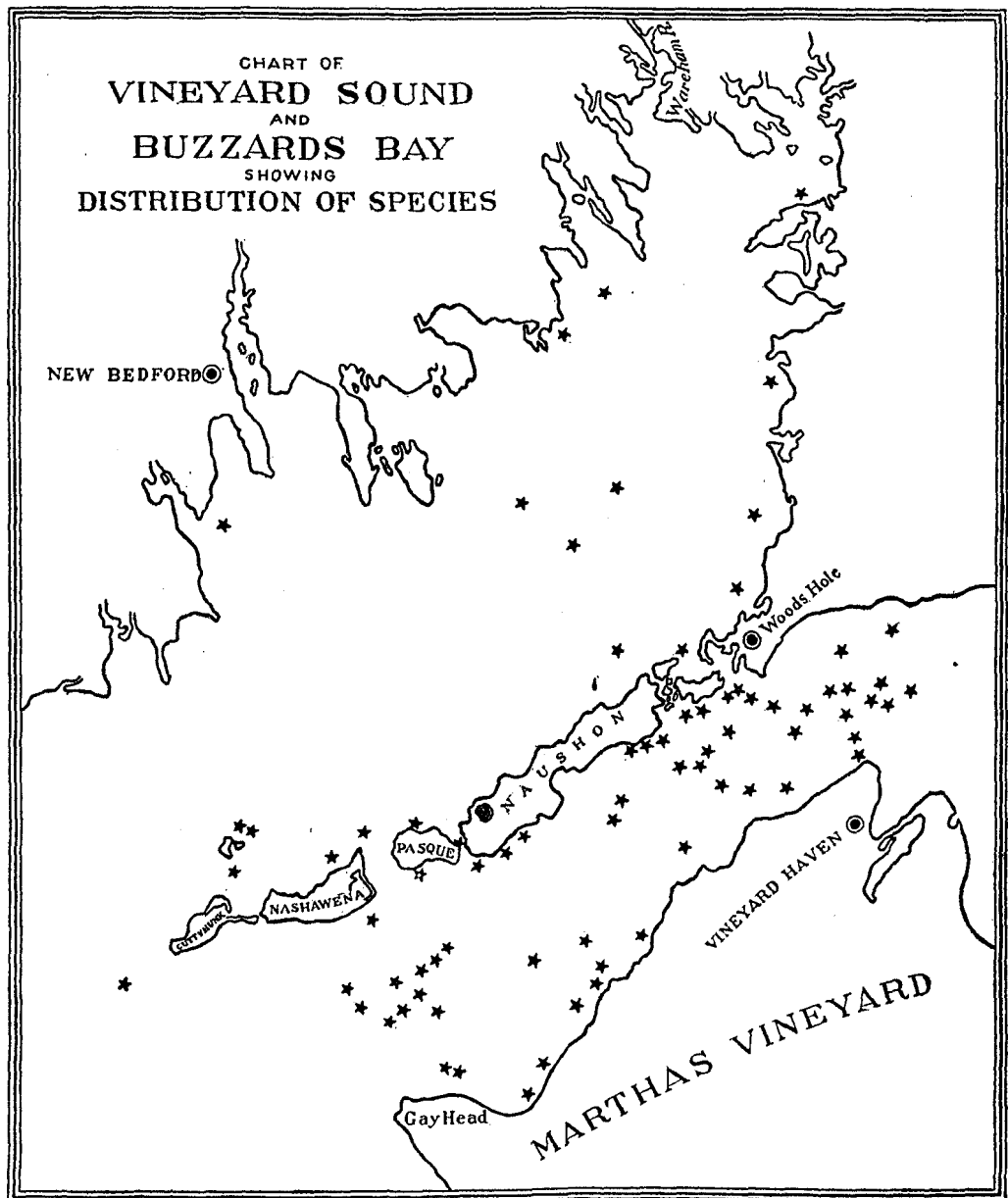
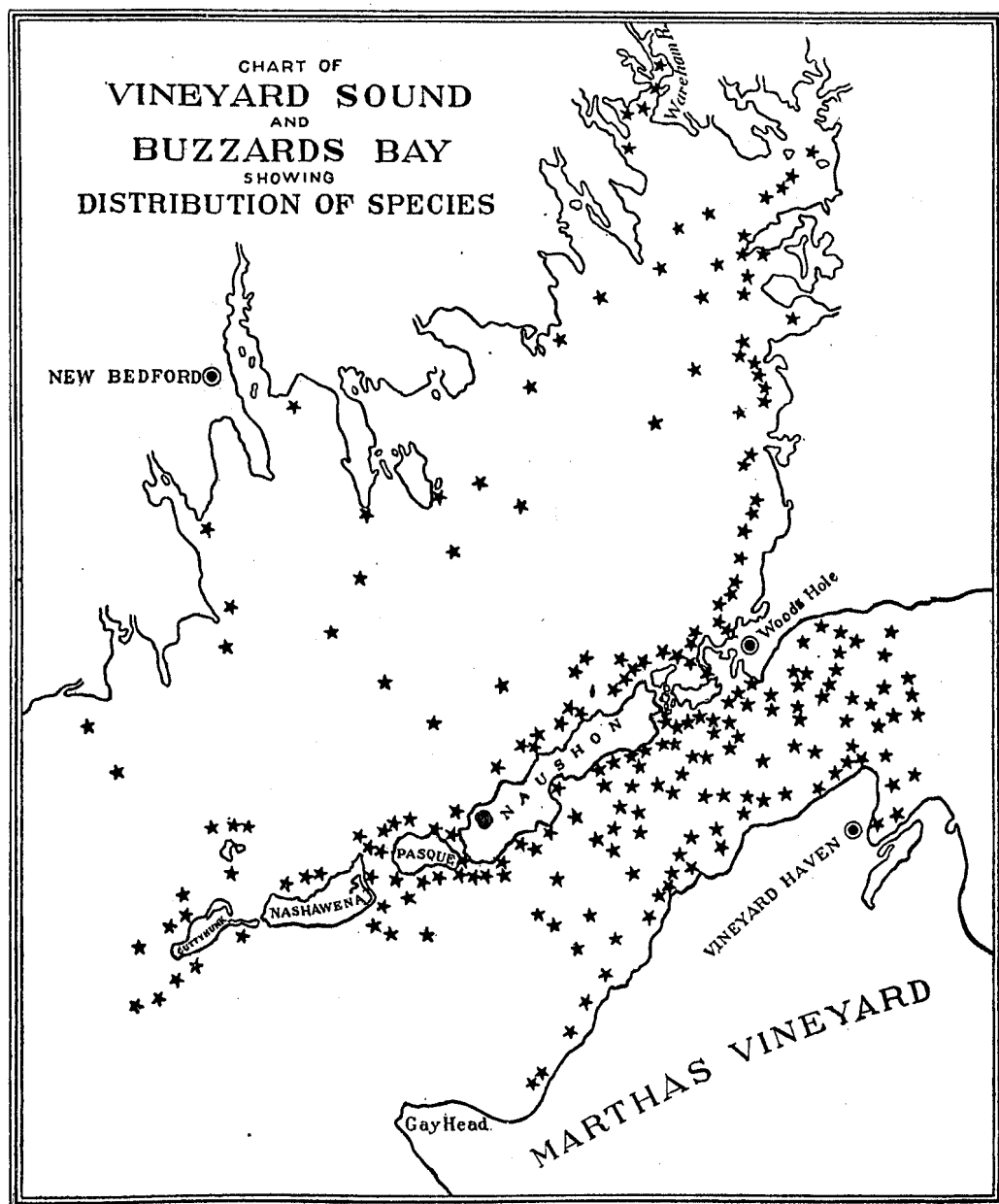
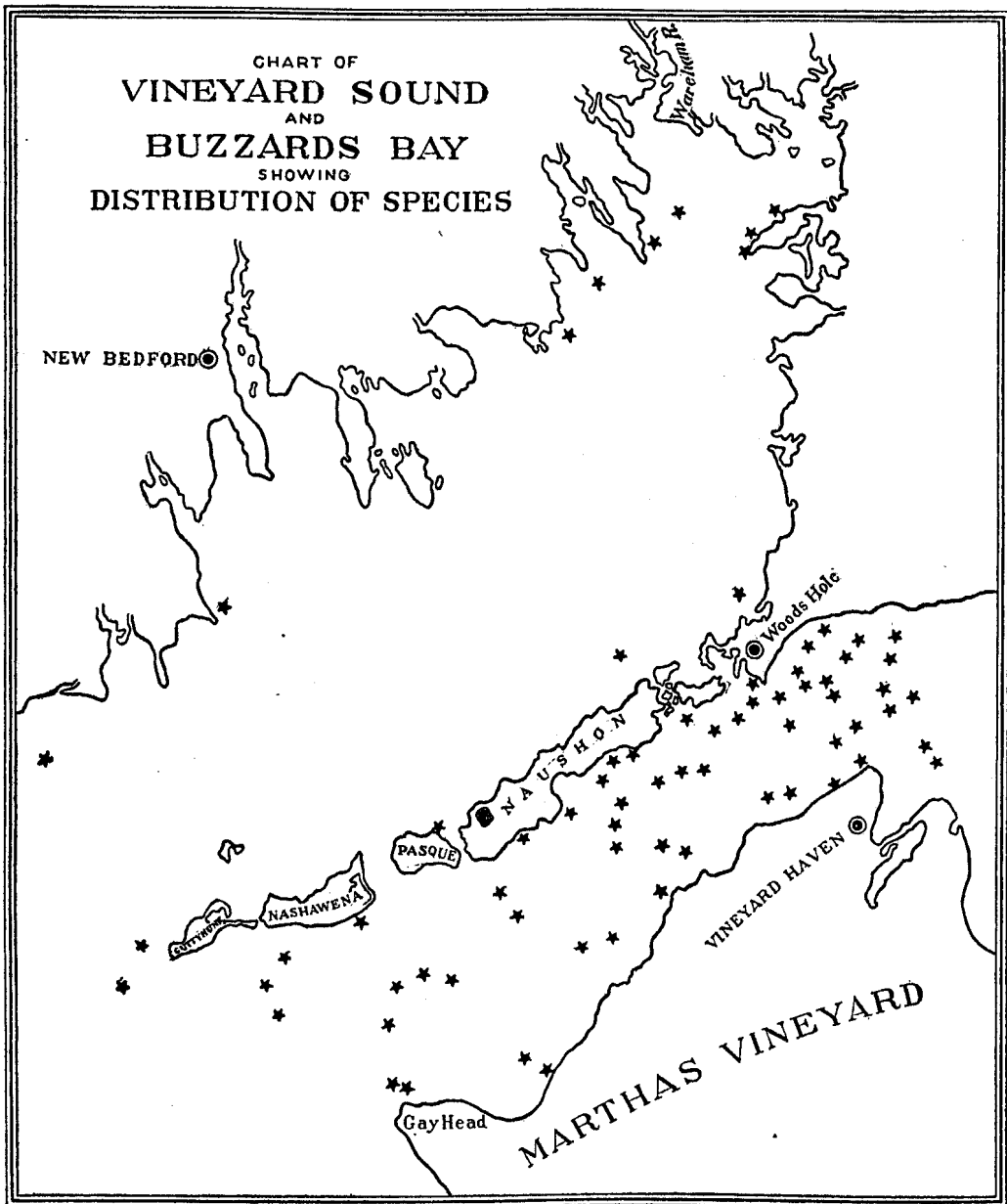


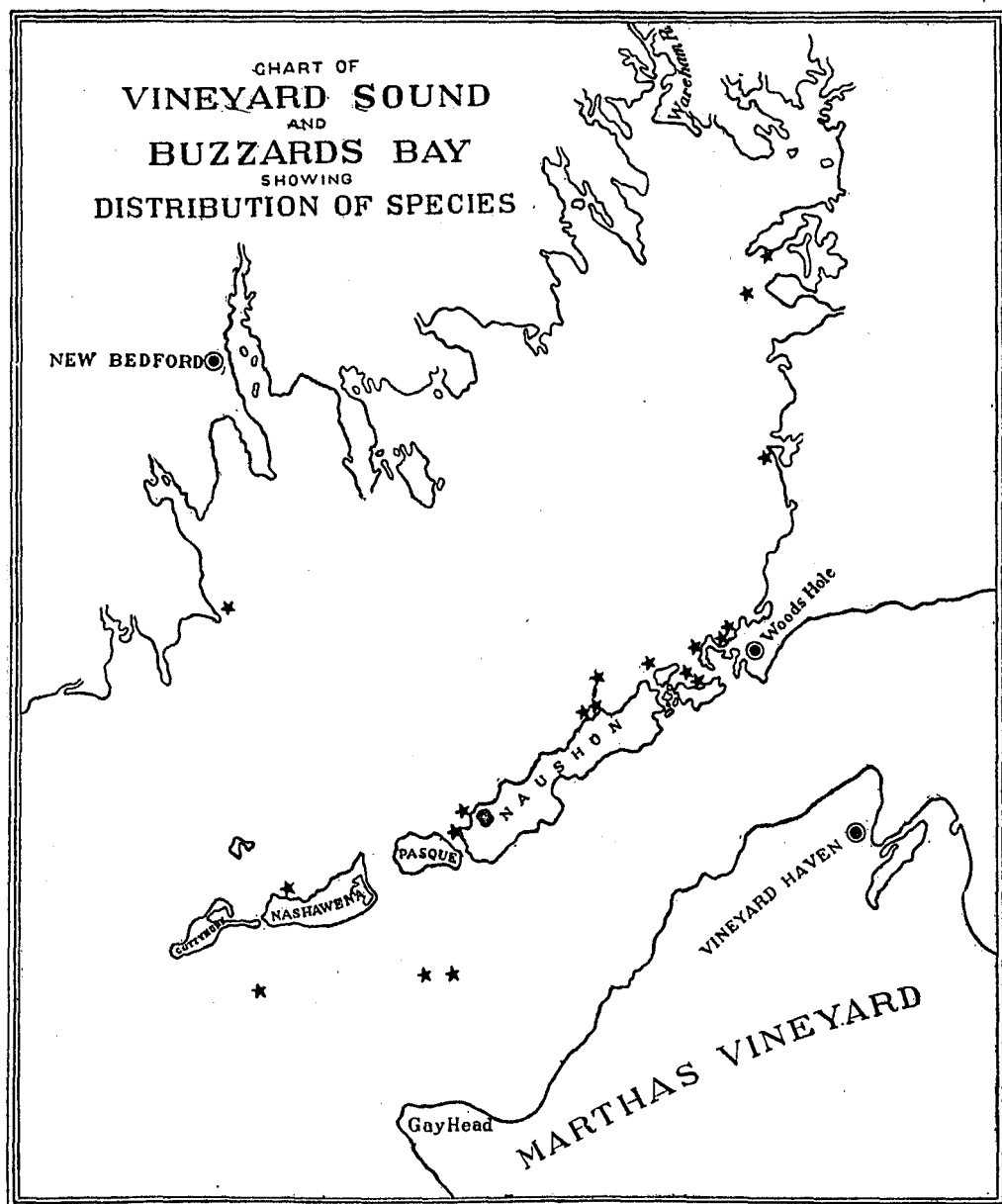
CHART 79.—*Parasabella microphthalmia*.

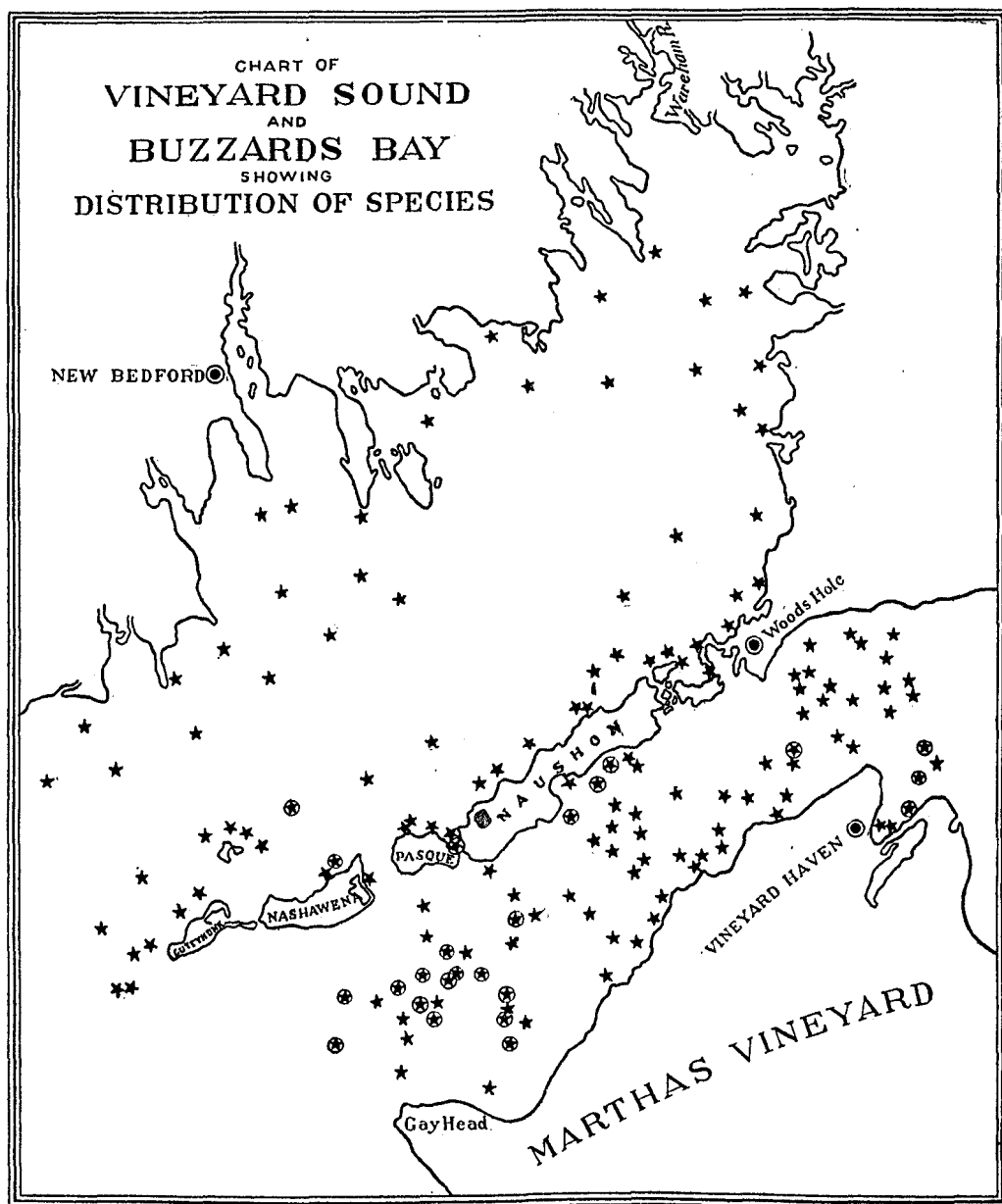
CHART 80.—*Pseudopotamilla oculifera*.

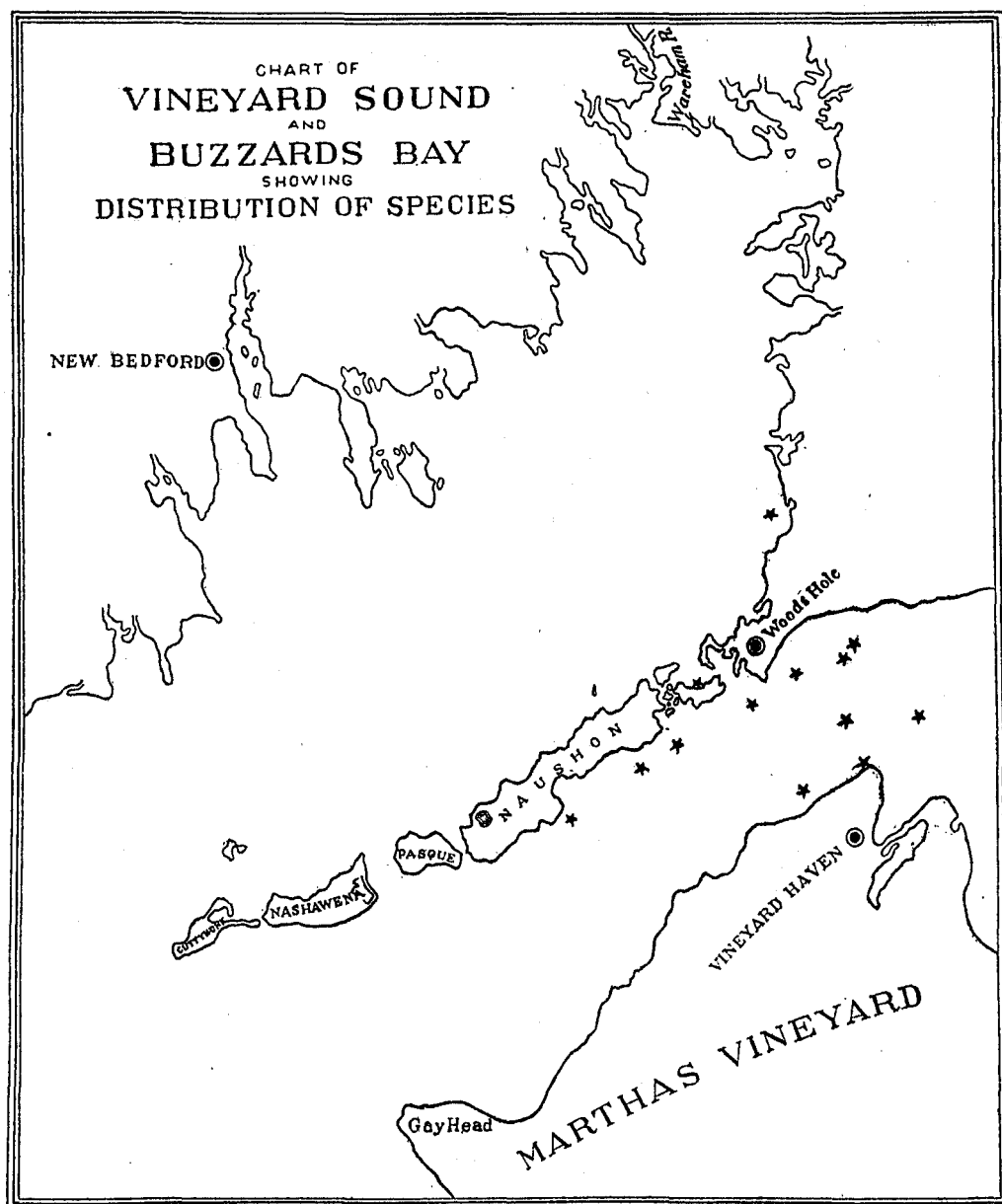


CHART 81.—*Hydroides dianthus*.

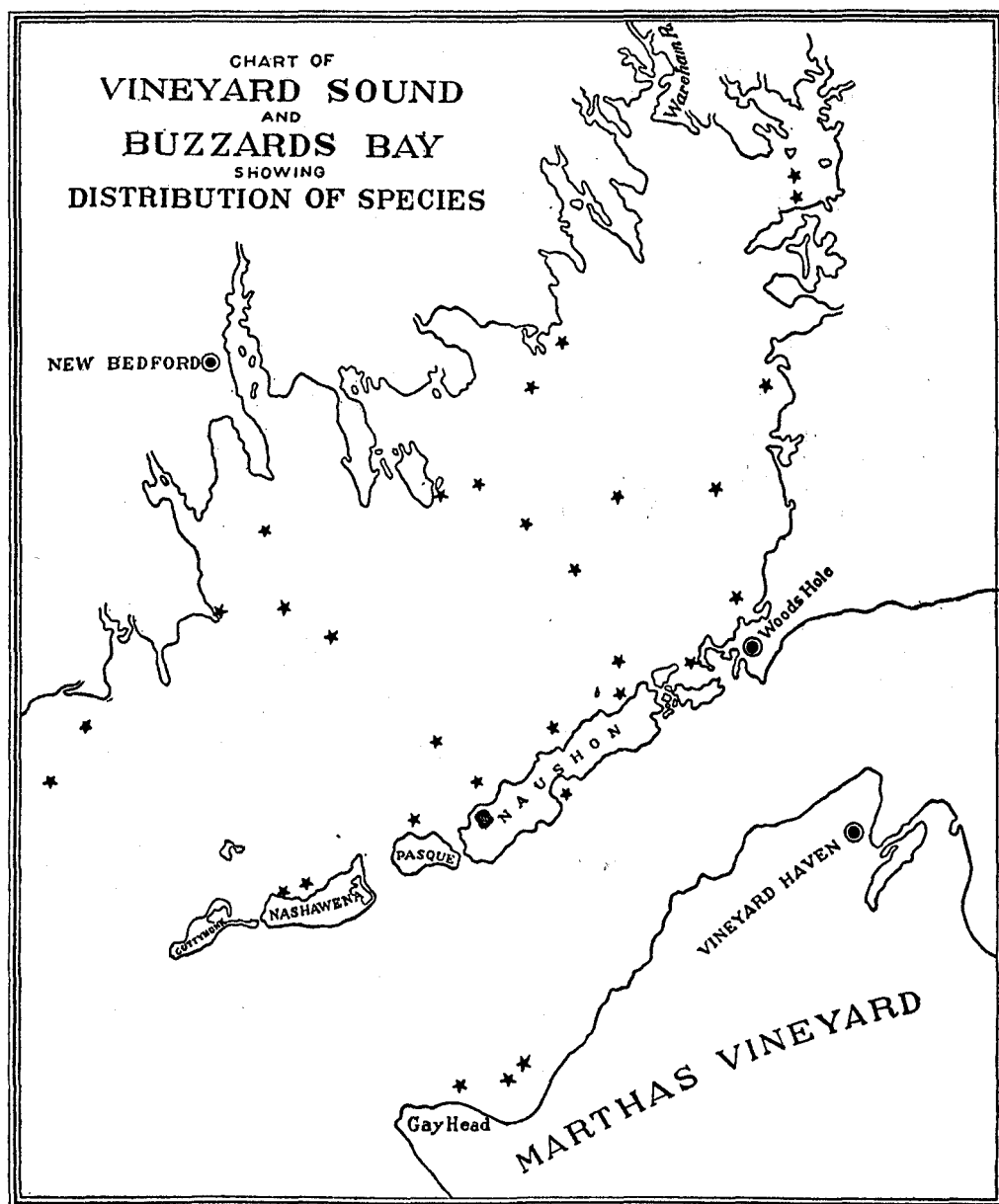
CHART 82.—*Sabellaria vulgaris*.

CHART 83.—*Phascolion strombi*.

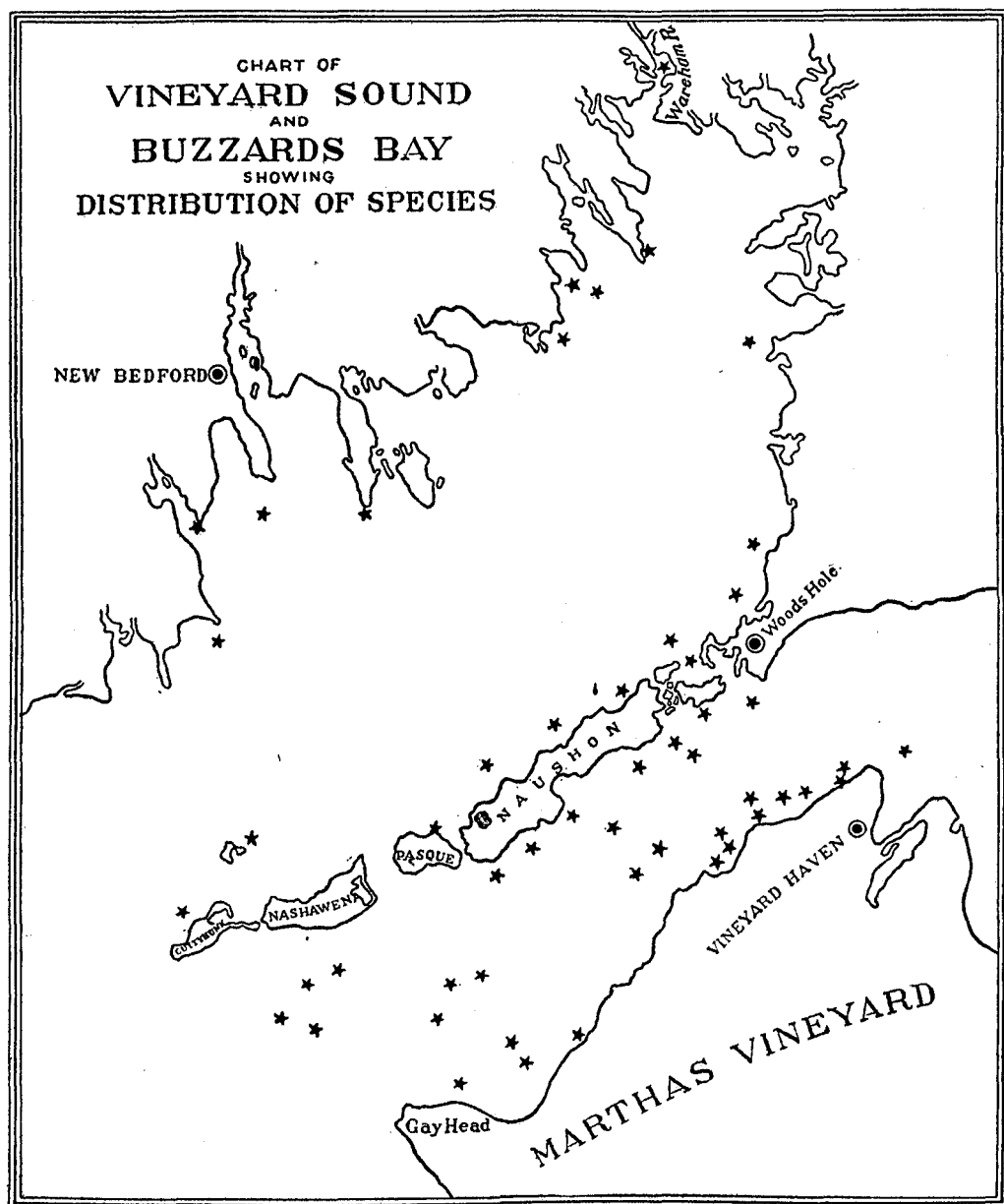
CHART 84.—*Balanus eburneus*.

CHART 85.—*Lysianopsis alba*.



CHART 87.—*Ampelisca macrocephala*.

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CHART 88.—*Ampelisca spinipes*.



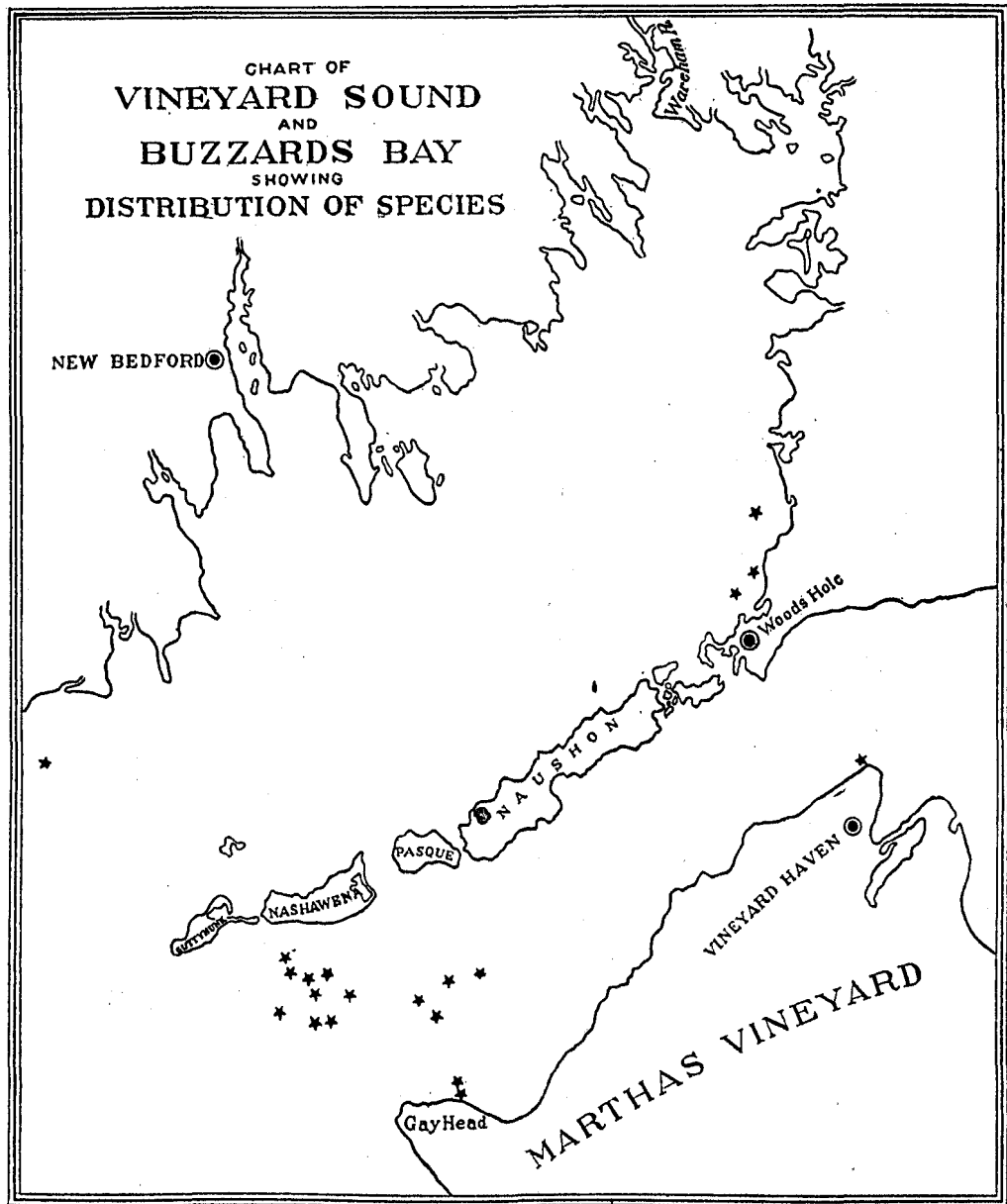
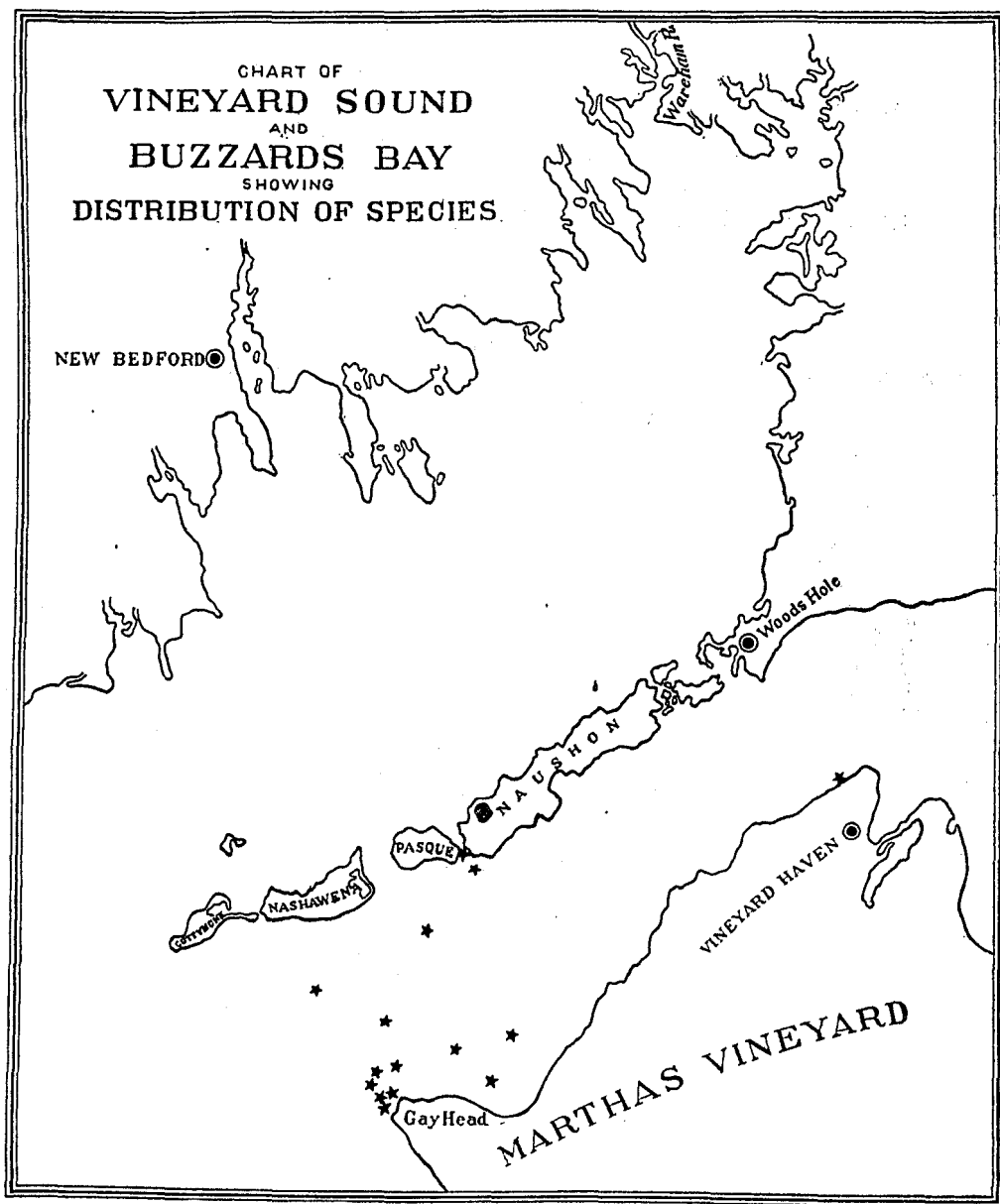
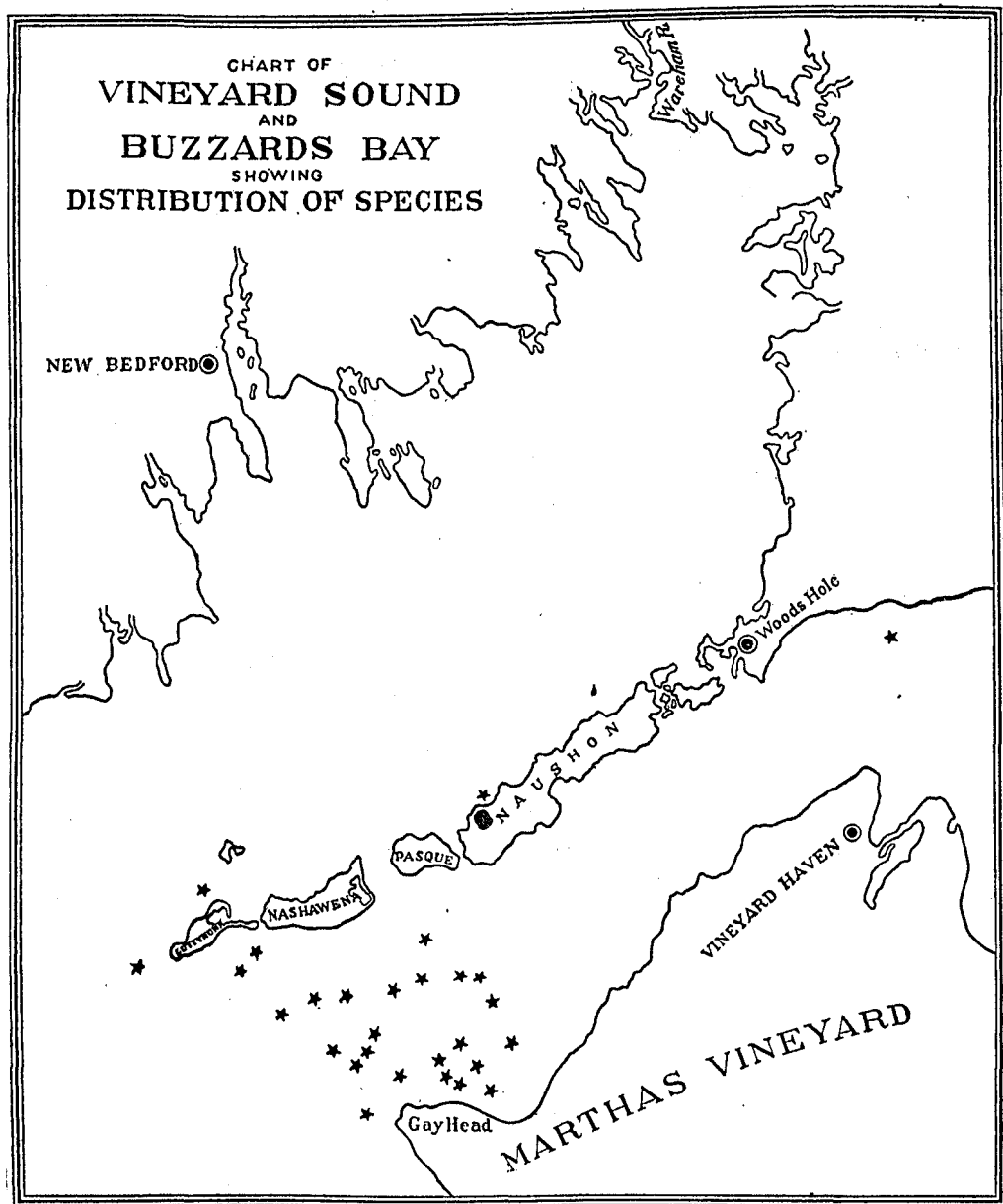


CHART 89.—*Byblis serrata*.

CHART 90.—*Calliopus læviusculus*.

CHART 91.—*Pontogenia inermis*.

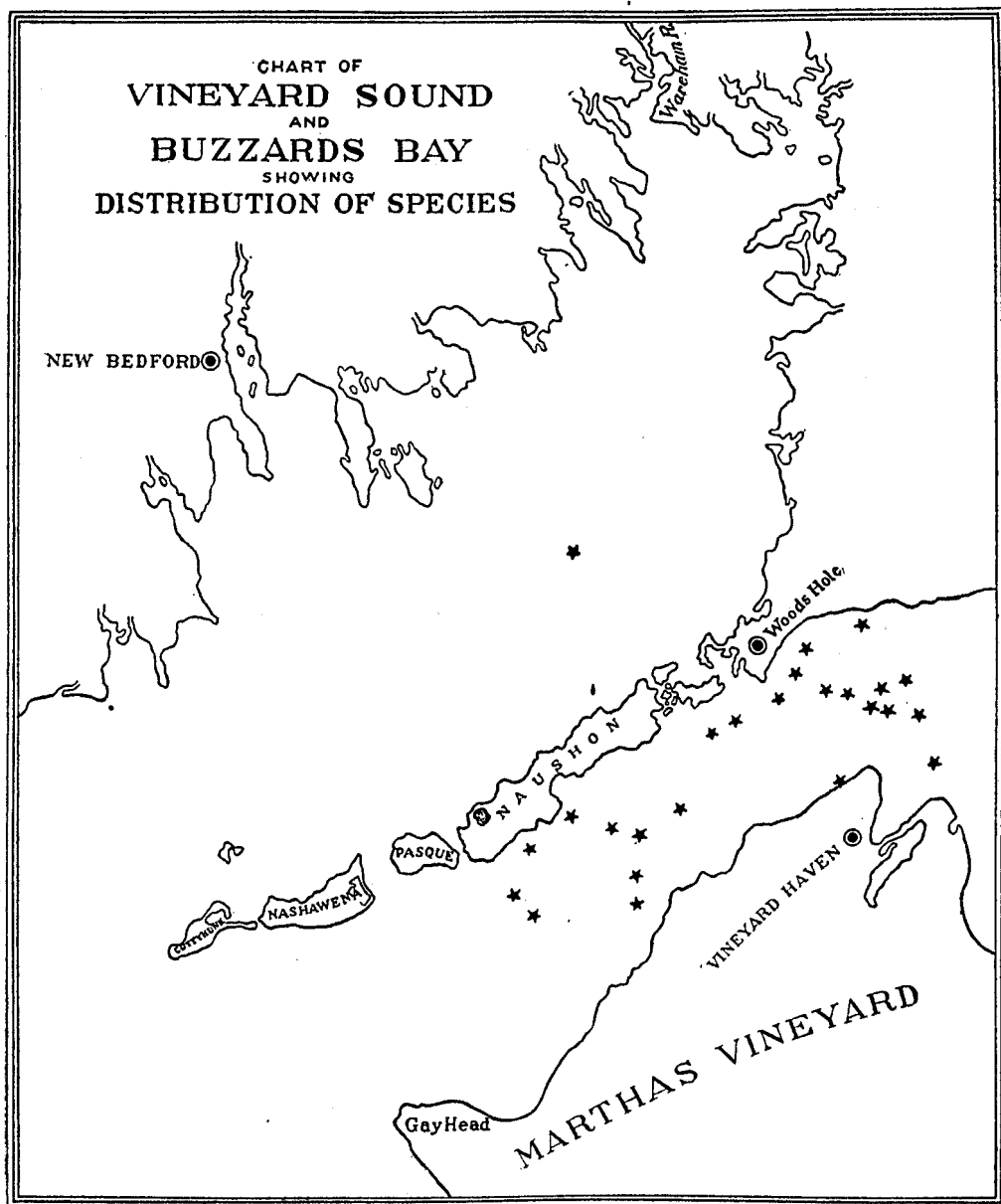


CHART 92.—Batea secunda.

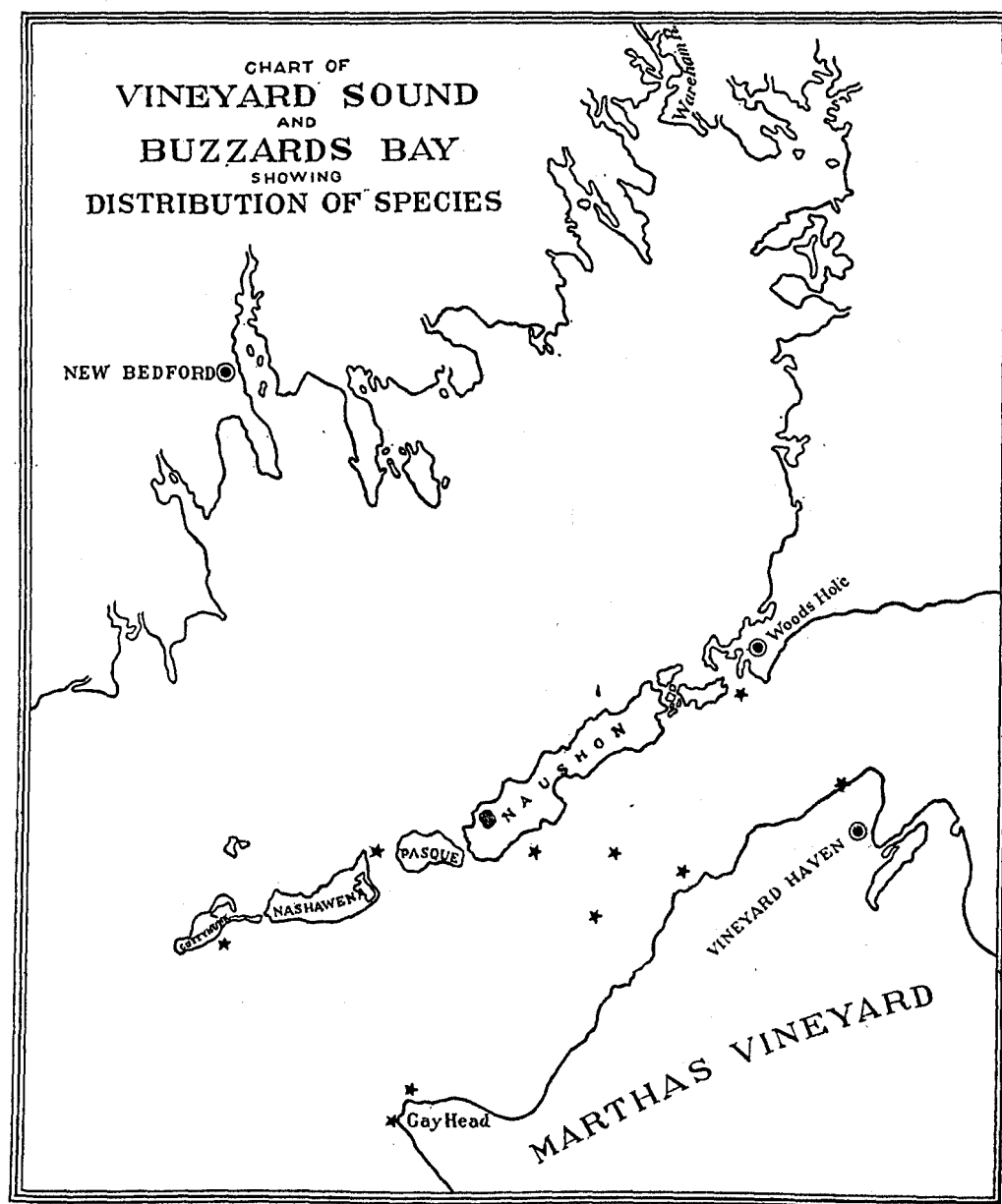
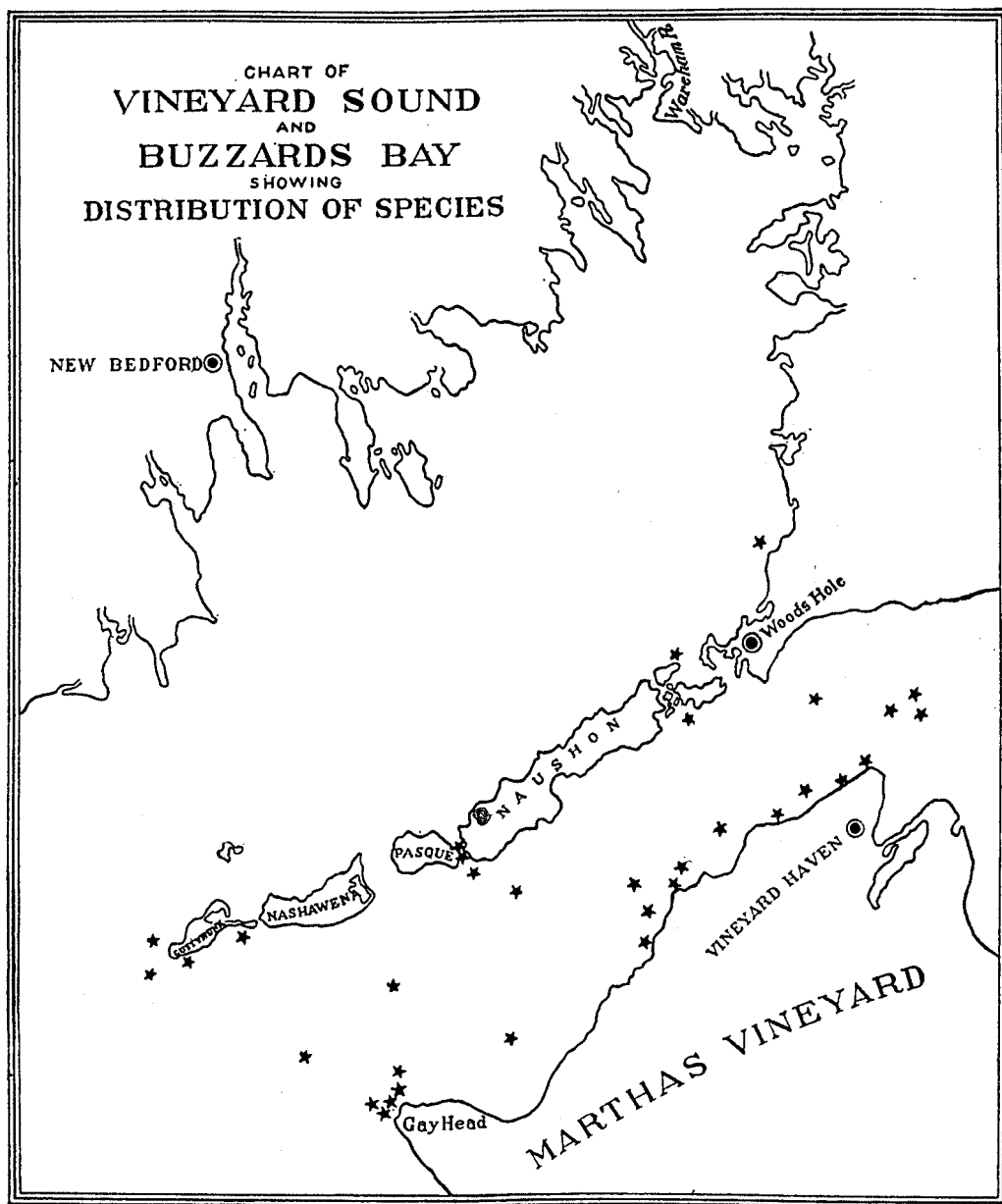


CHART 93.—*Gammarus annulatus*.

CHART 94.—*Elasmopus laevis*.

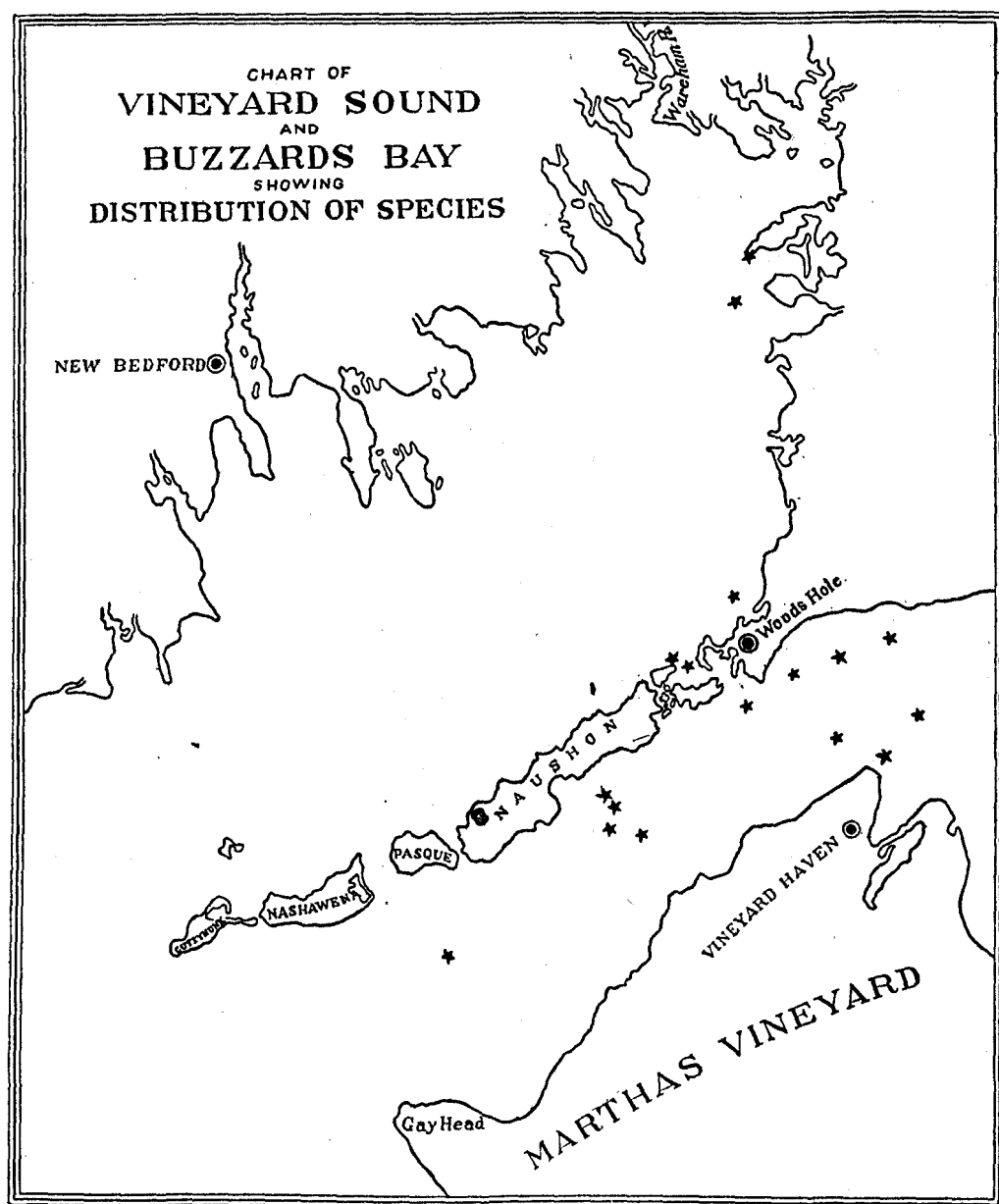
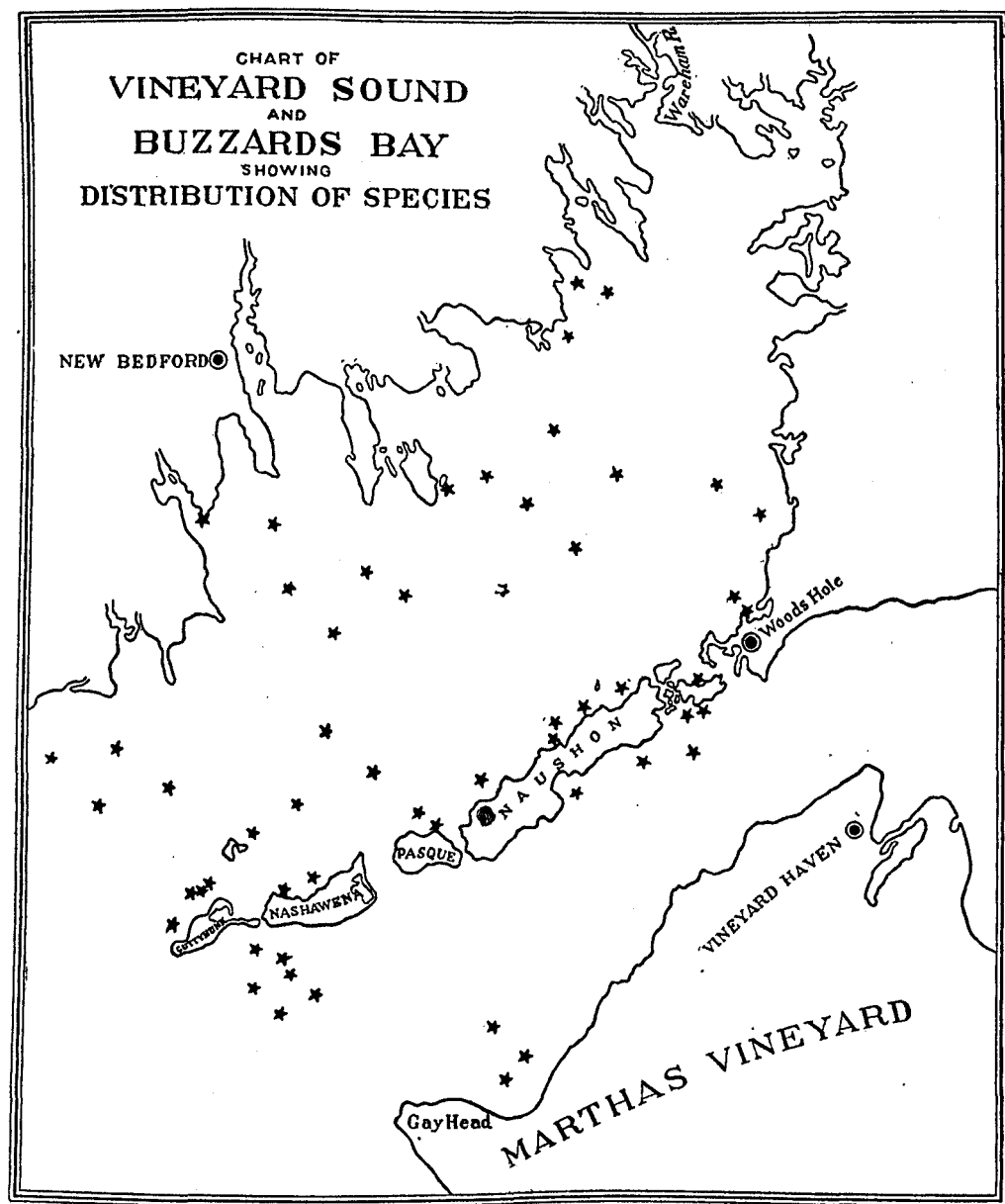


CHART 95.—Antonœ smithi.

CHART 96.—*Ptilocheirus pinguis*.



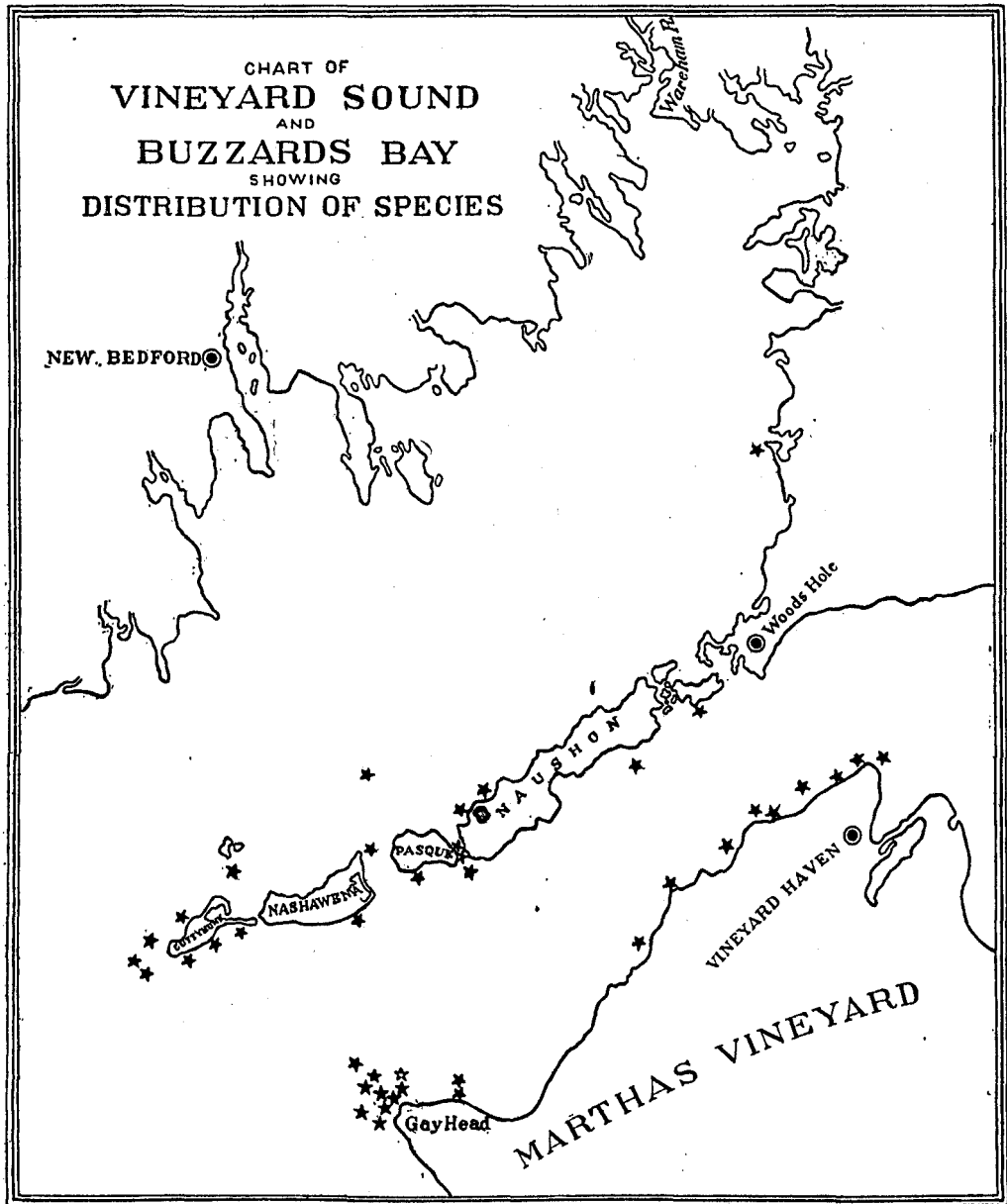
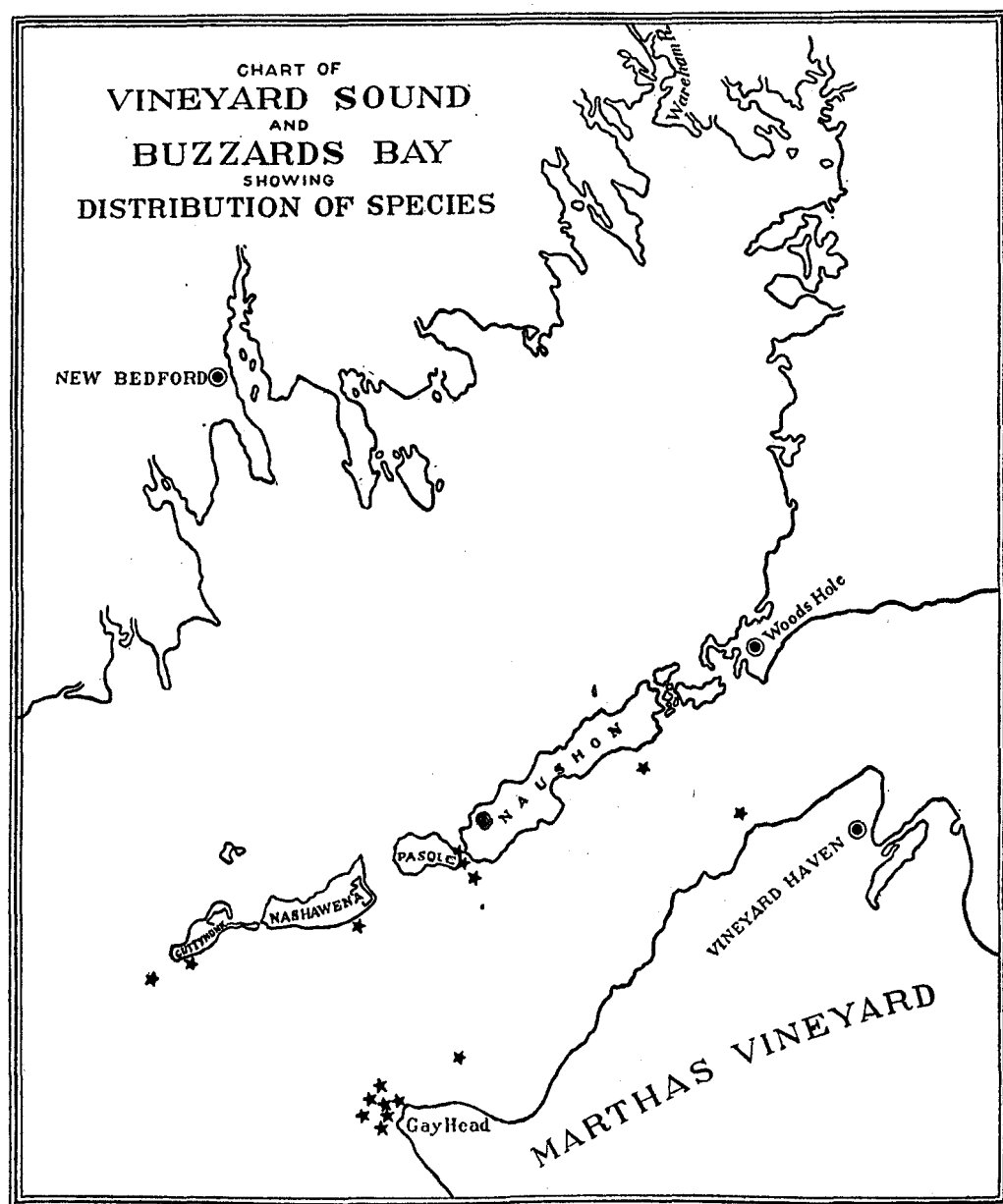


CHART 97.—*Amphithoë rubricata*.

CHART 98.—*Jassa marmorata*.

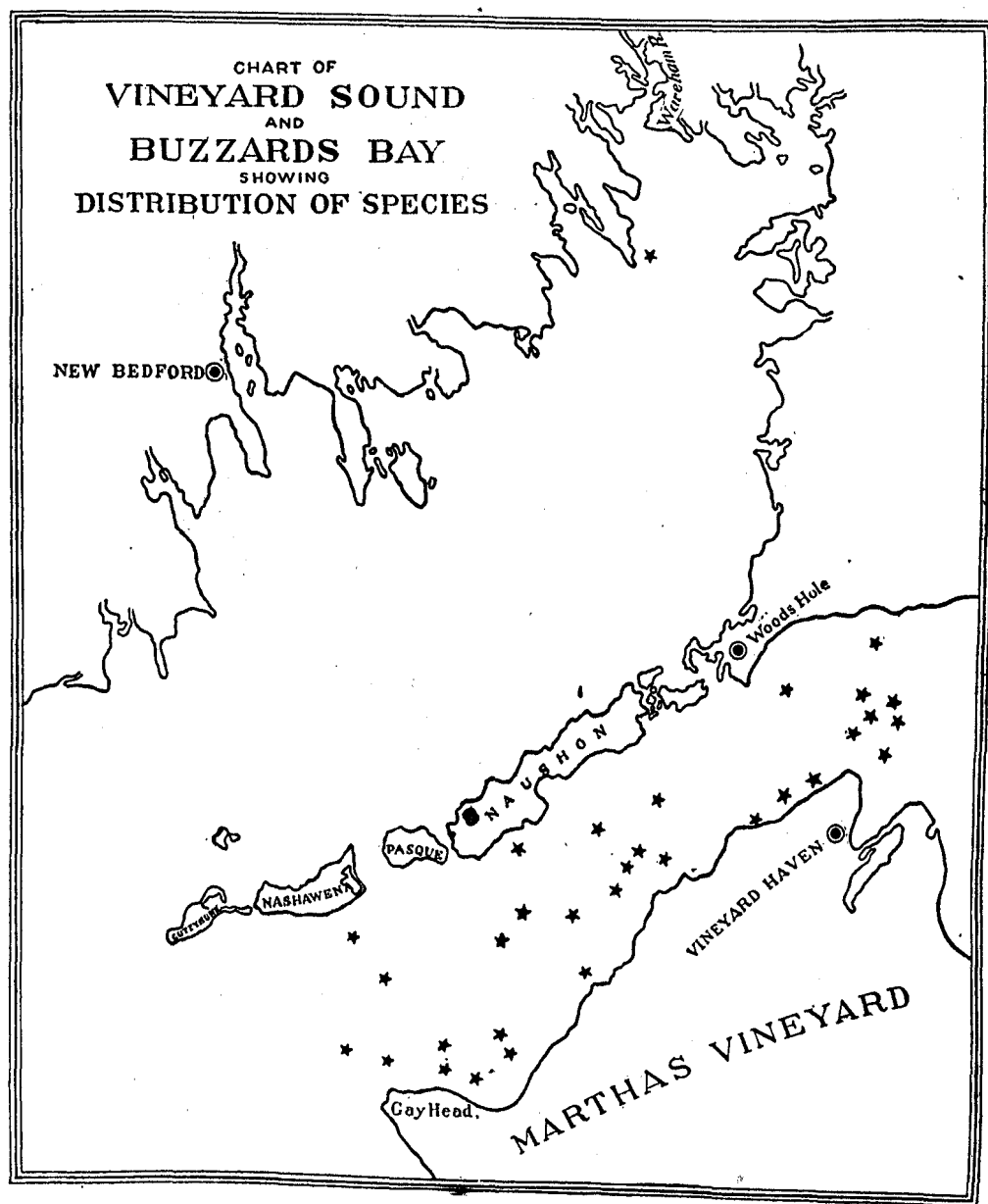
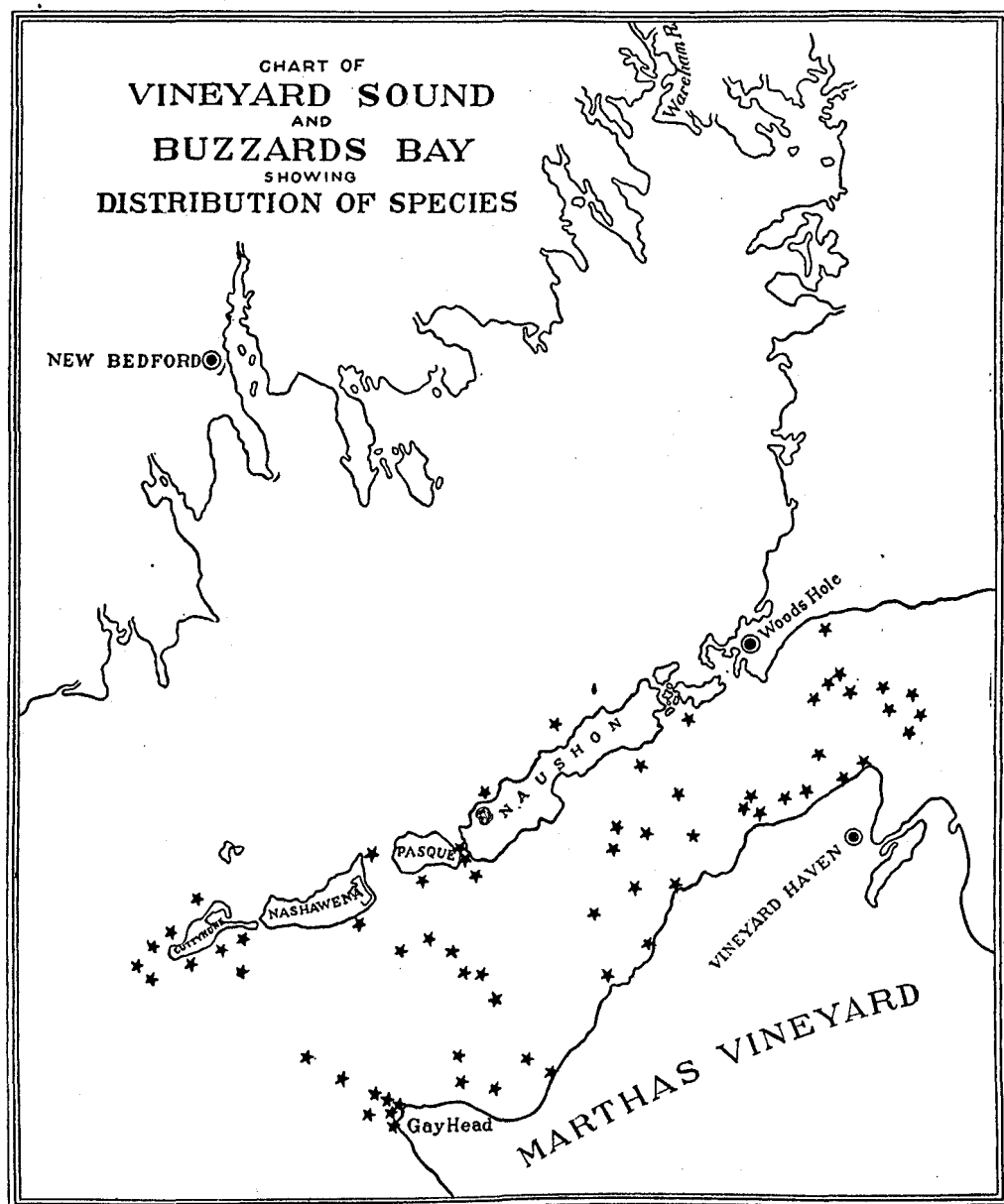
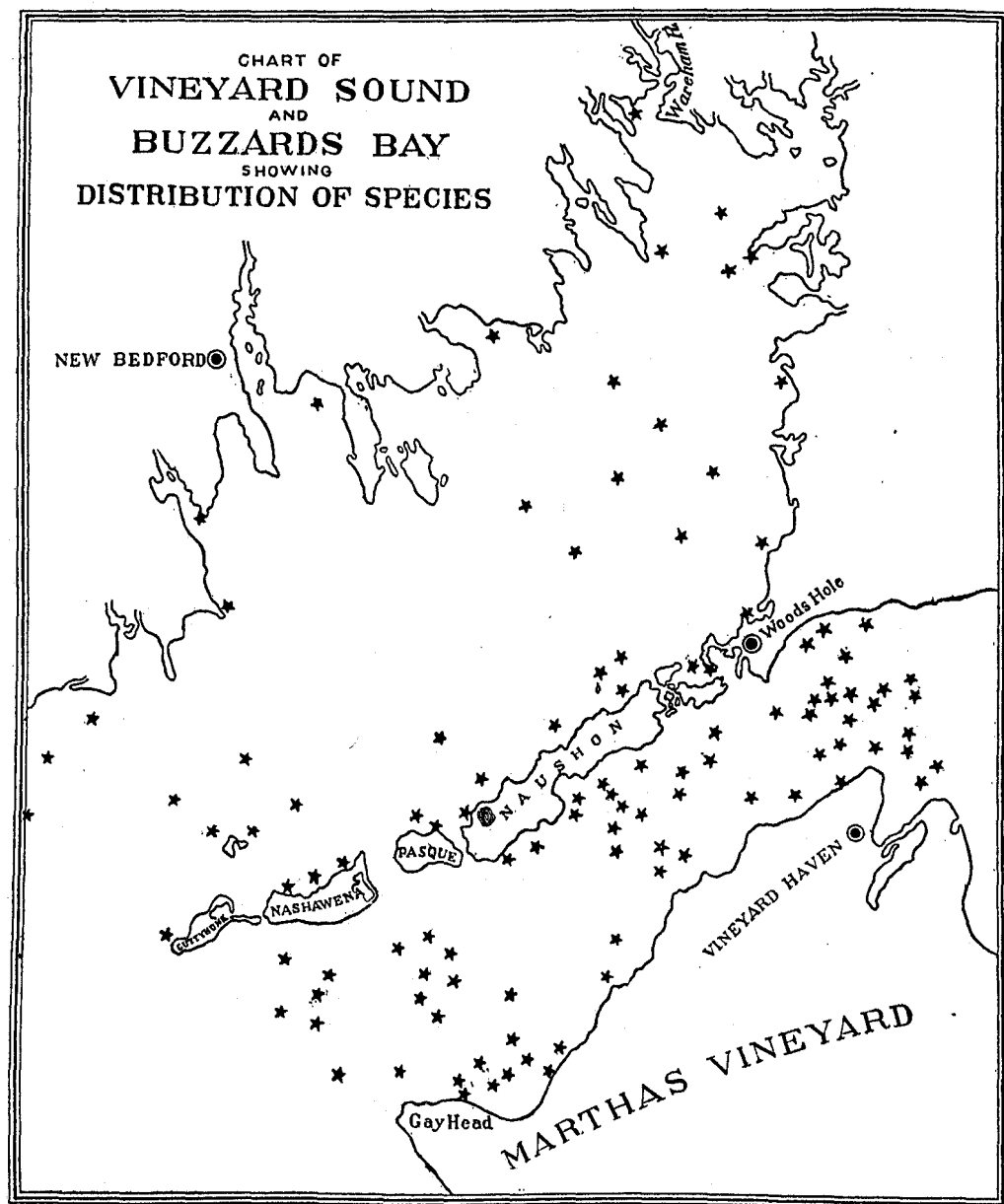


CHART 99.—*Erichthonius minax*.

CHART 100.—*Corophium cylindricum*.

CHART 101.—*Unciola irrorata*.

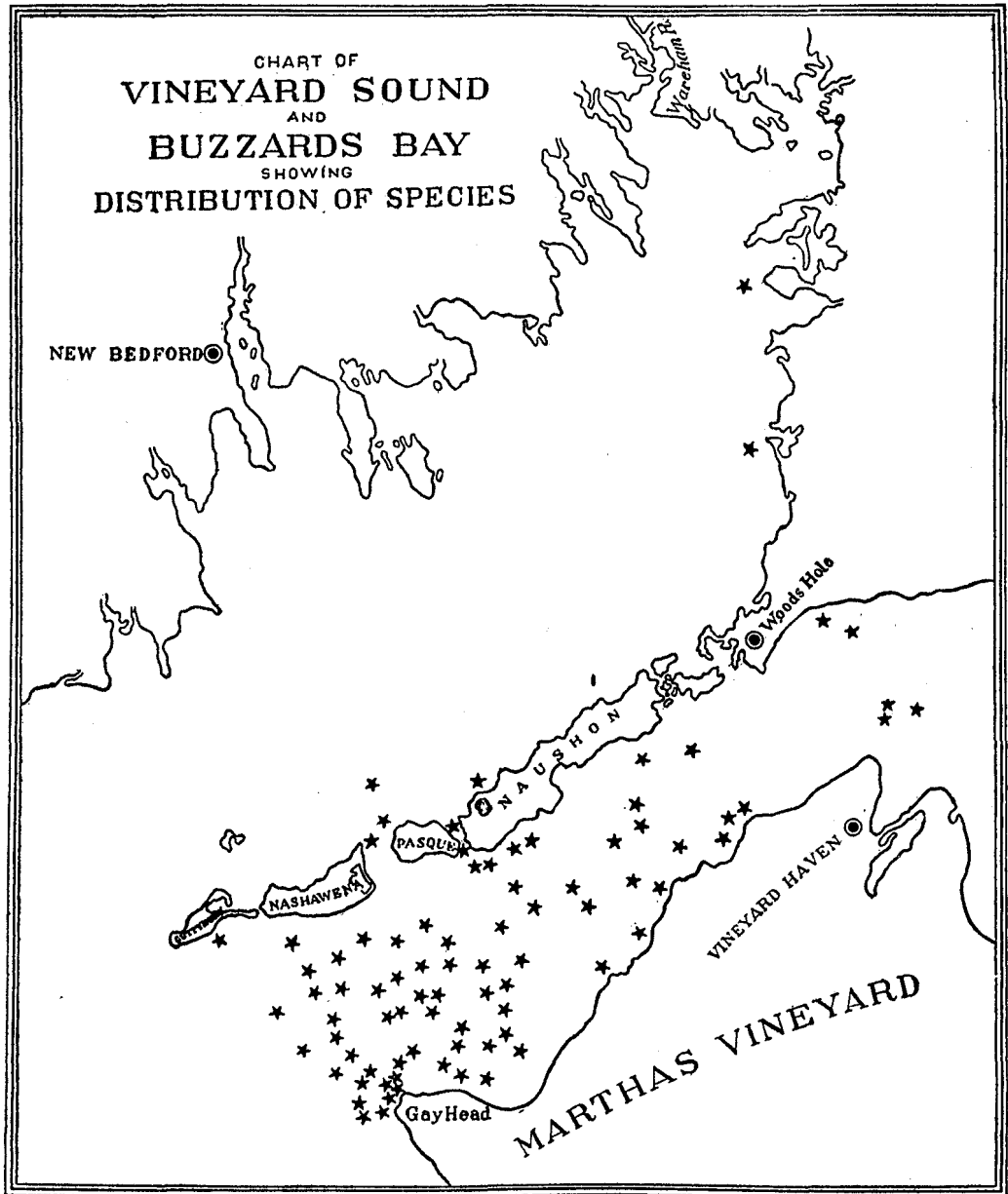
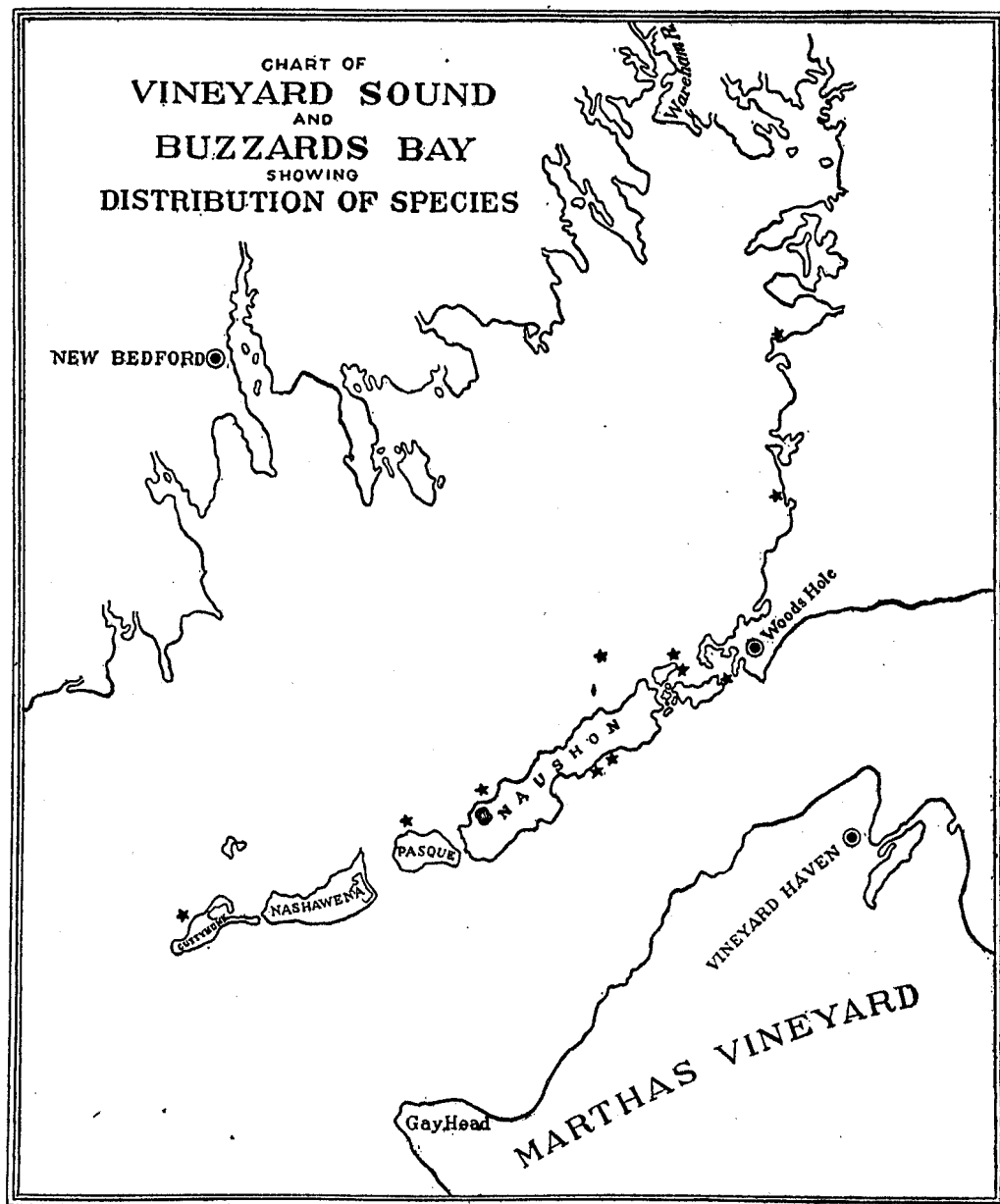
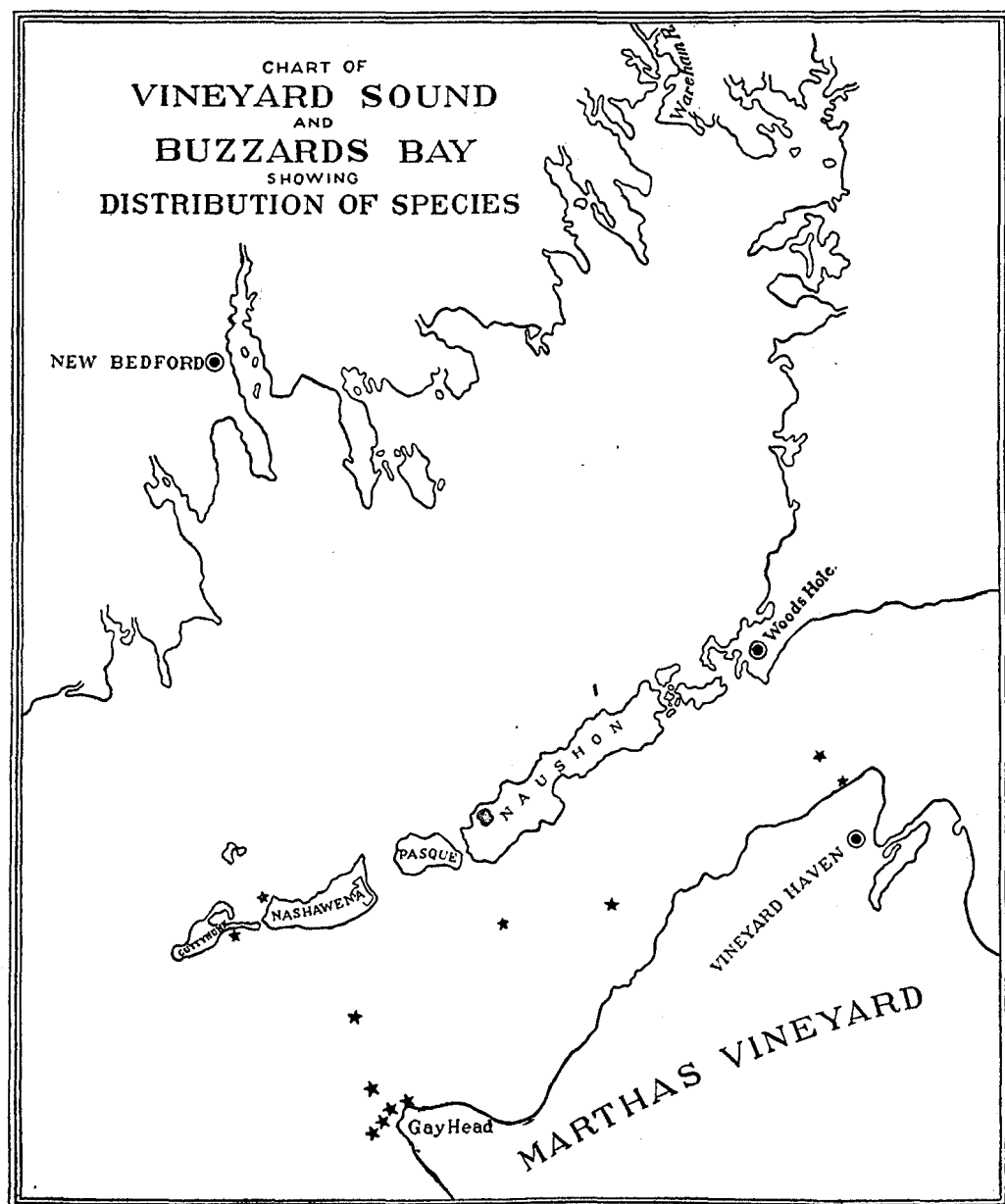


CHART 102.—Caprellidæ sp.

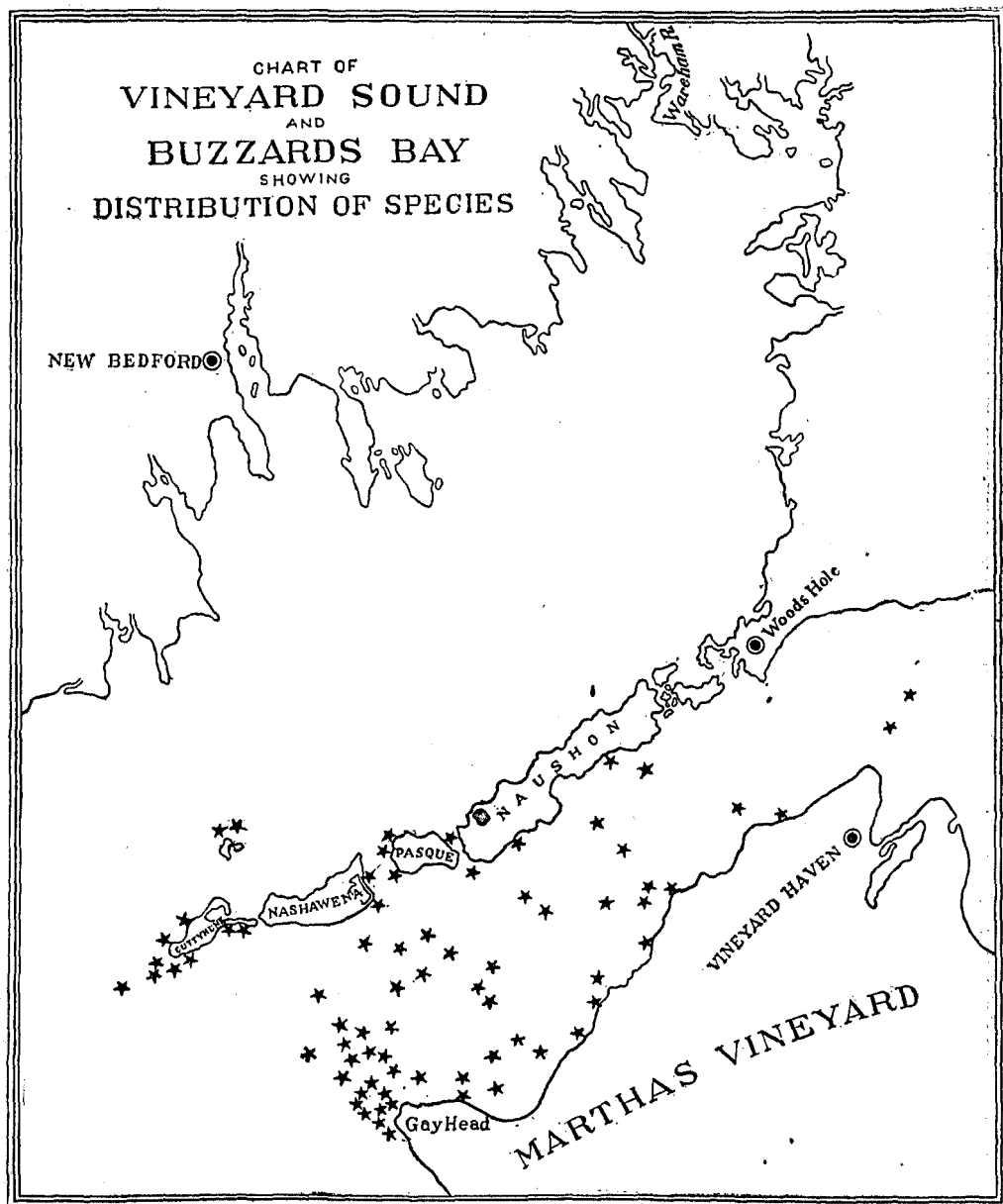
Owing to a confusion in the earlier records, the distributions of two members of this family (*Caprella geometrica* and *Æginella longicornis*), and possibly some others, have been plotted upon a single chart.

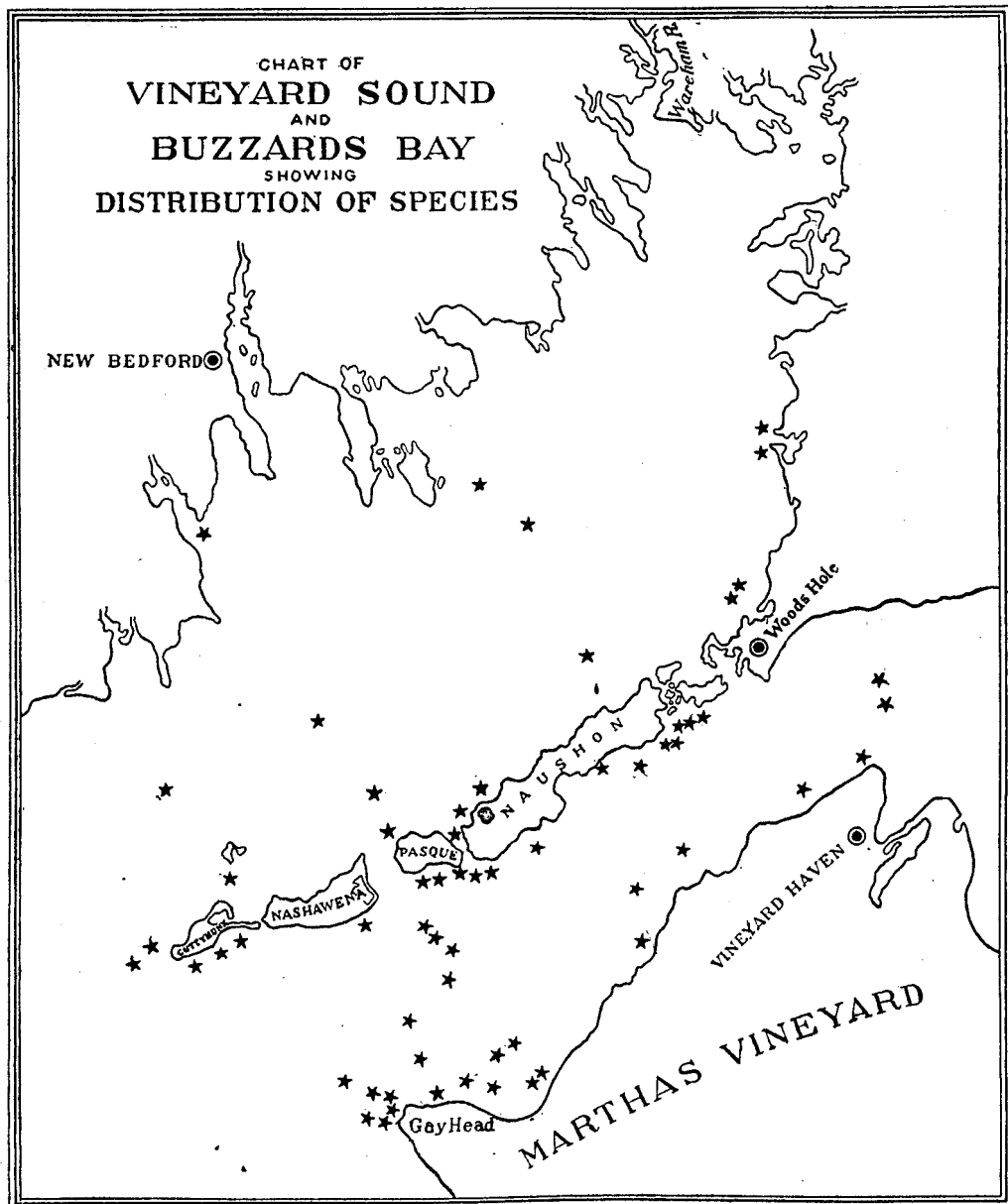
CHART 103.—*Leptochelia savignyi*.

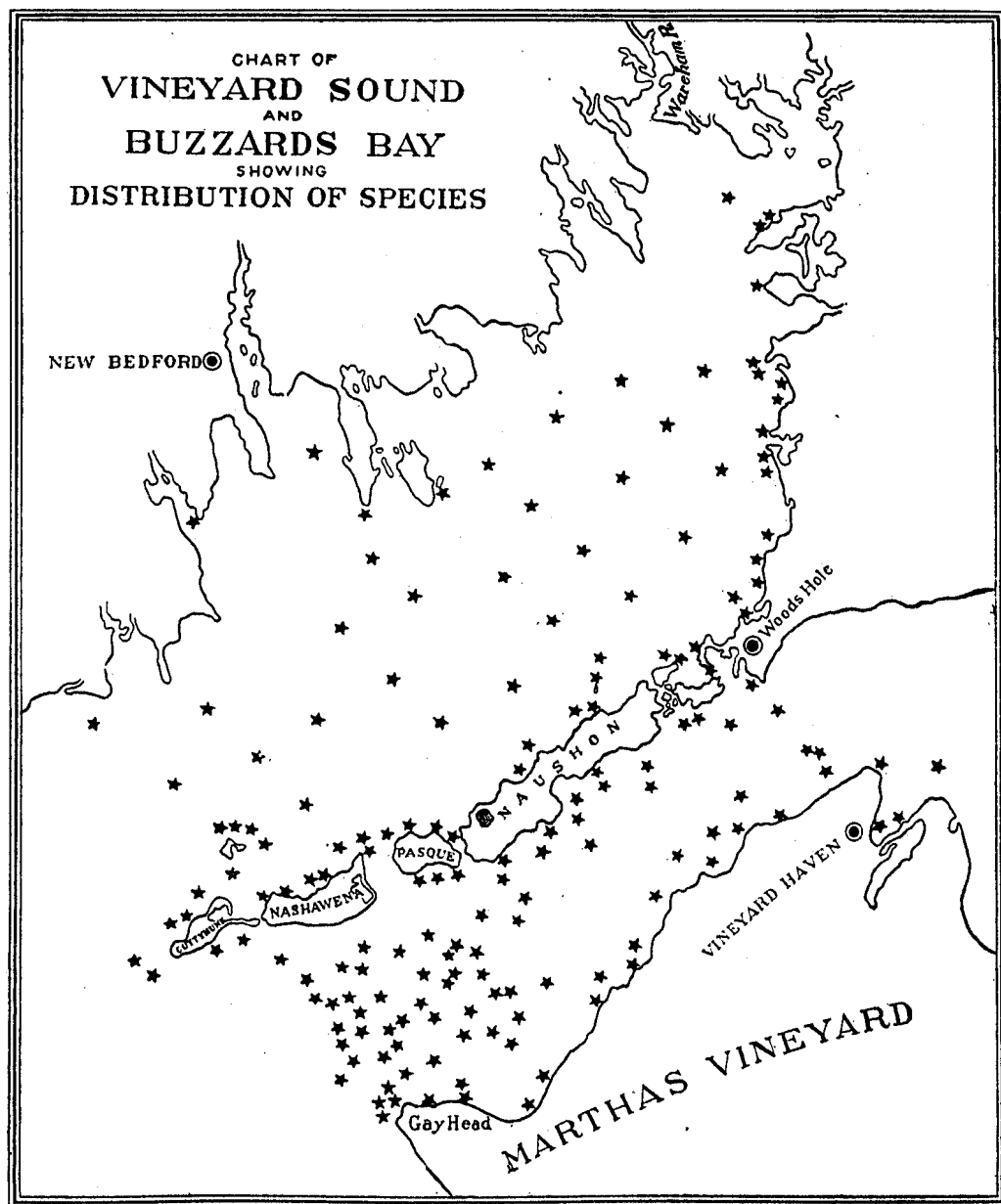
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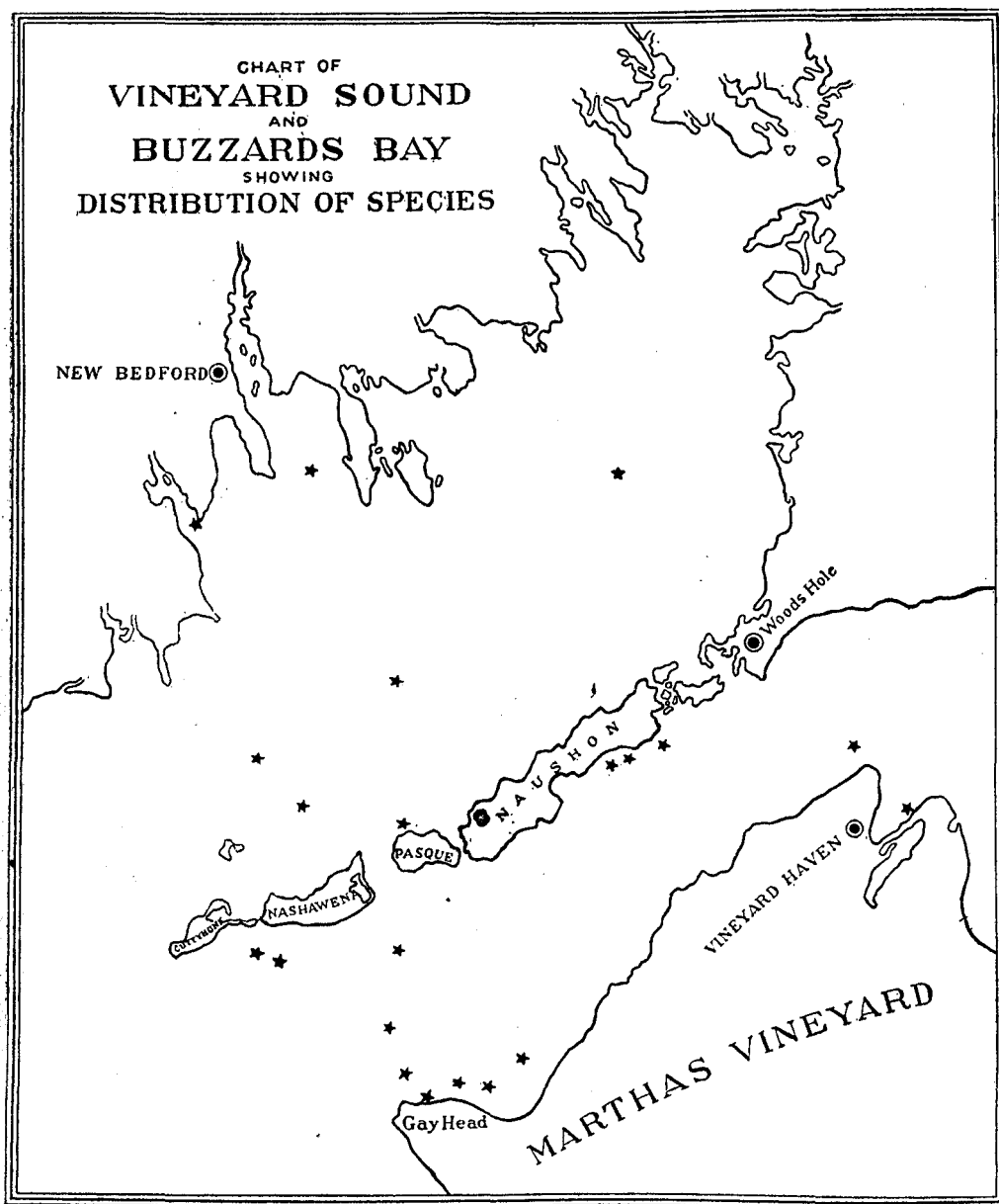
CHART 104.—*Idothea baltica*.

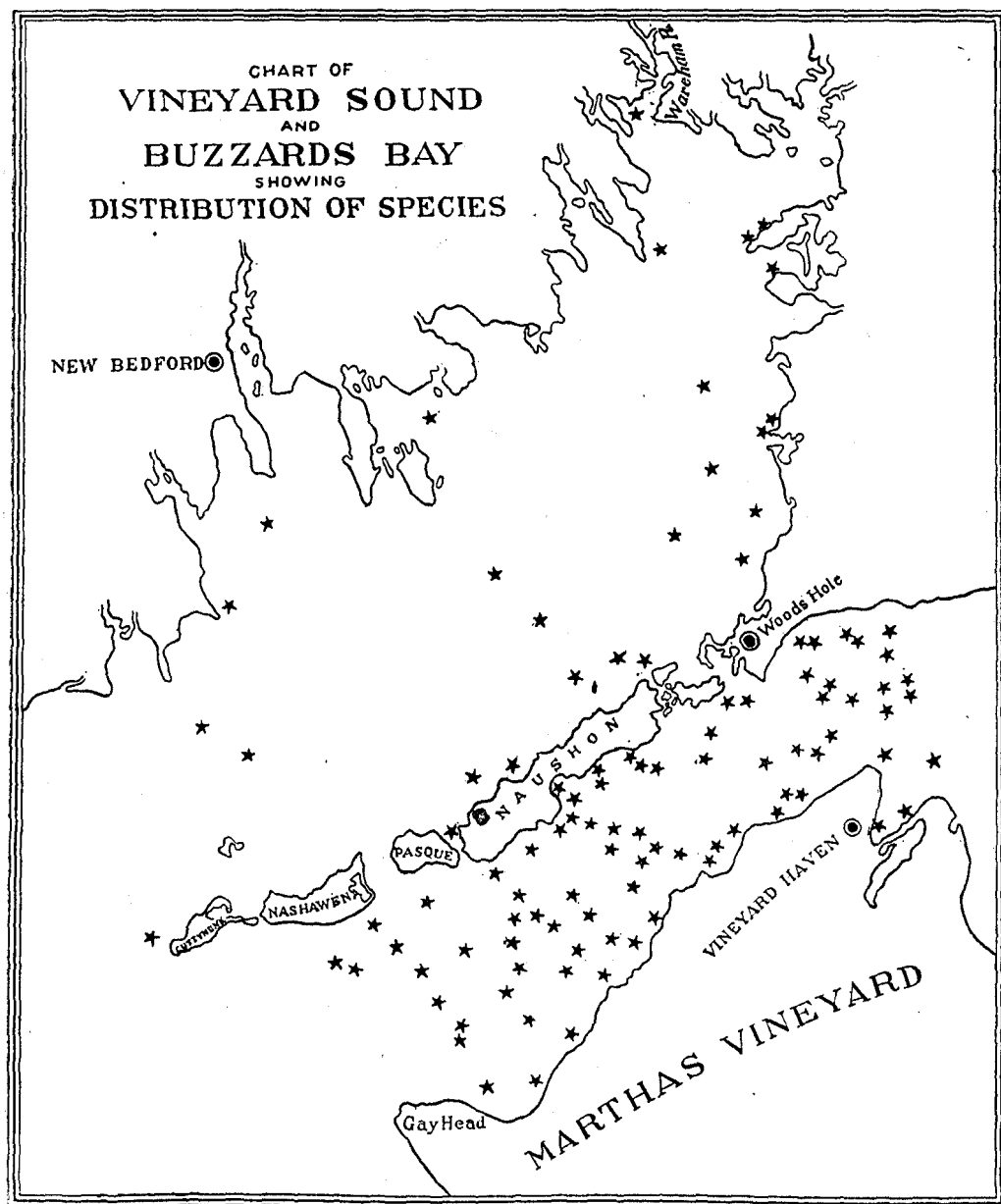


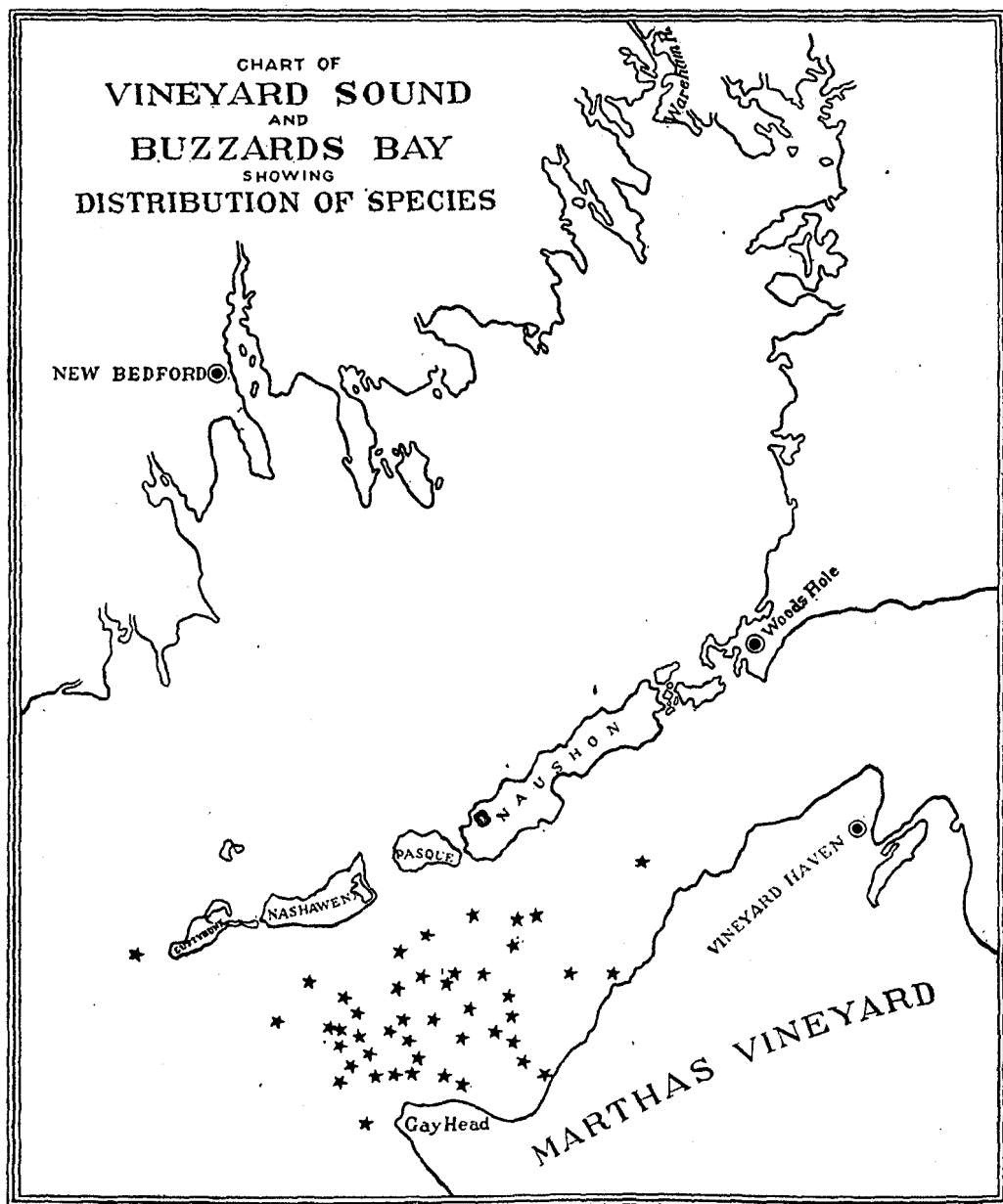
CHART 105.—*Idothea phosporea*.

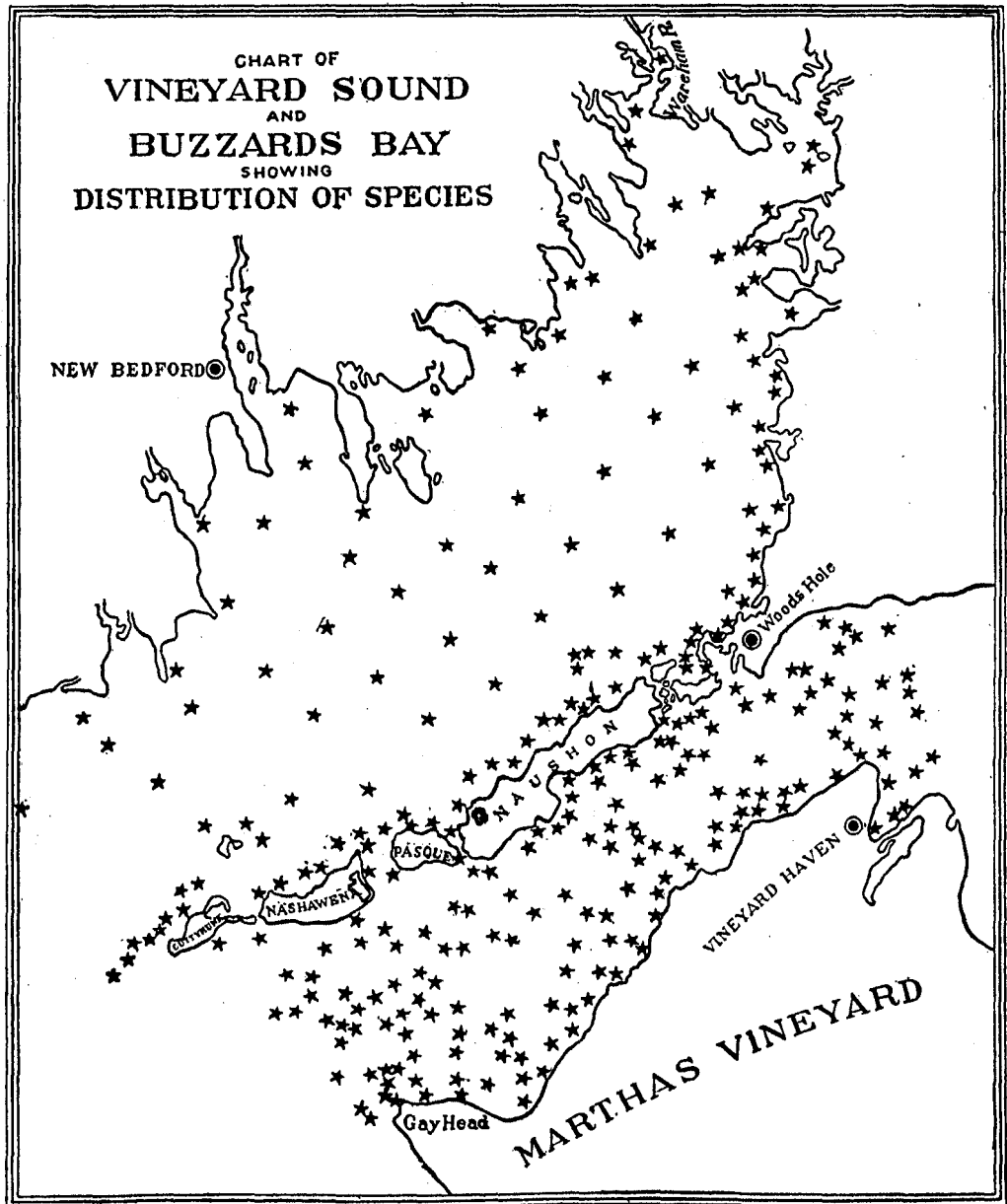
CHART 106.—*Erichsonella filiformis*.

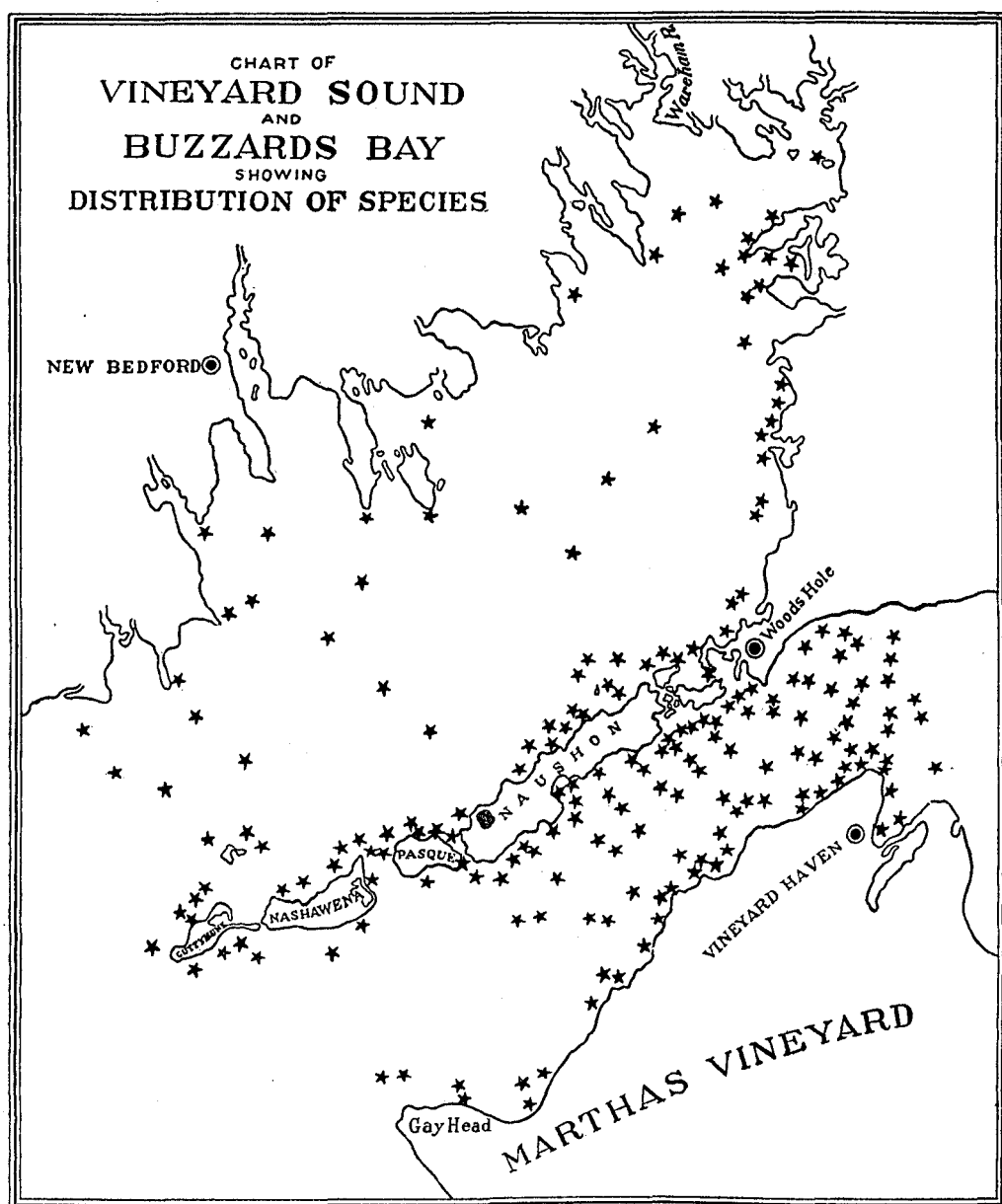
CHART 107.—*Crago septemspinosus*.

CHART 108.—*Homarus americanus*.

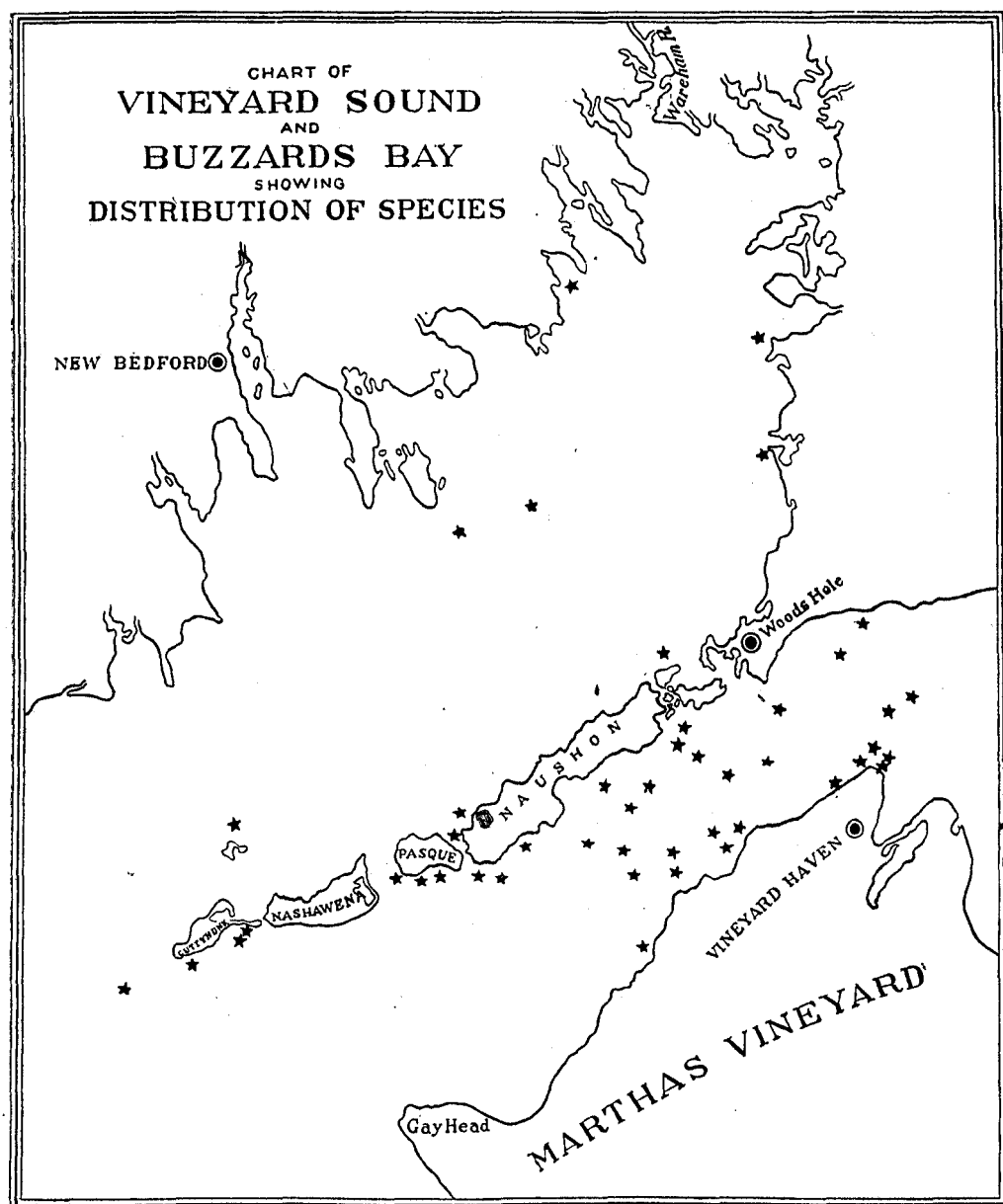
CHART 109.—*Pagurus pollicaris*.

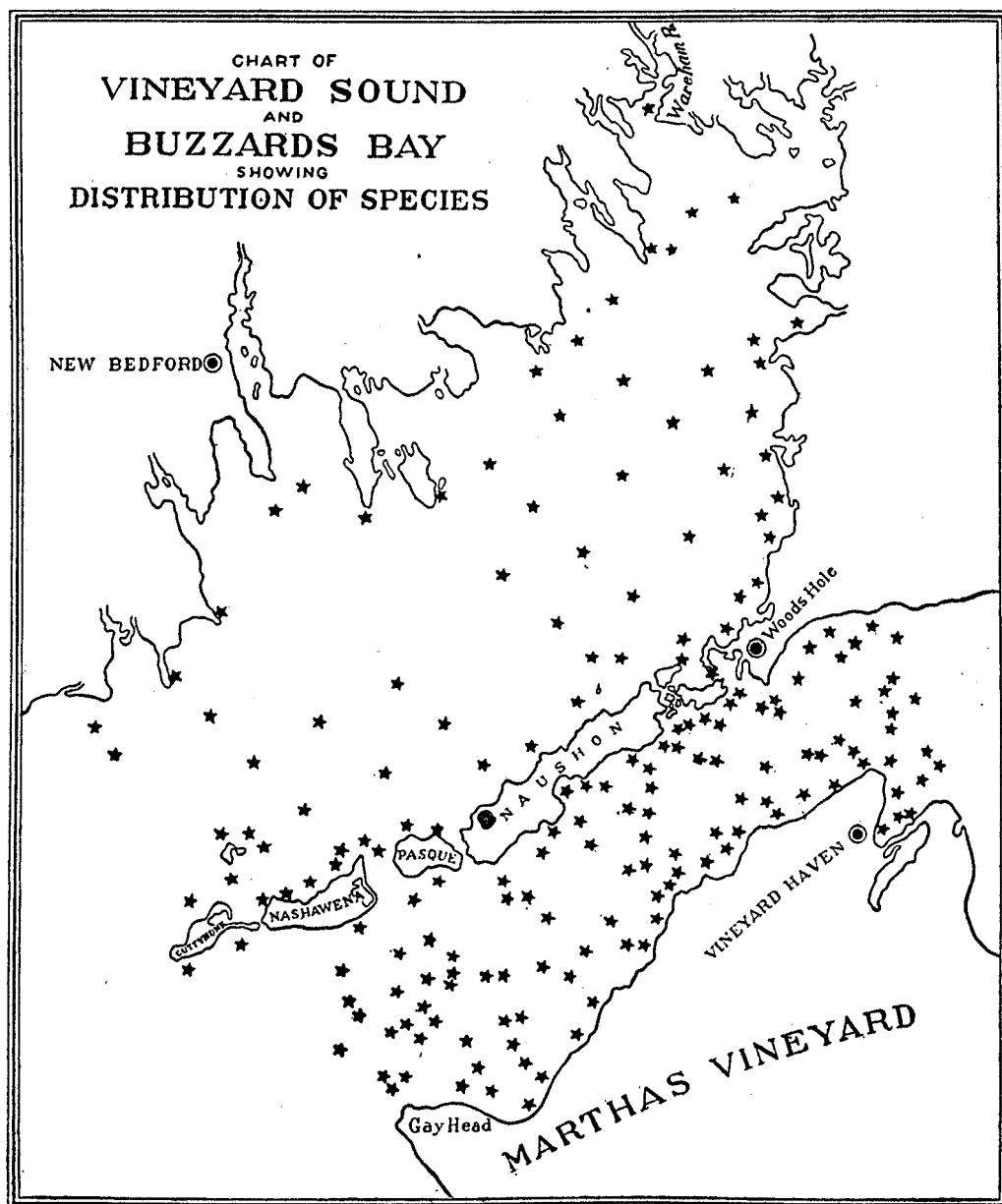
CHART 110.—*Pagurus acadianus*.

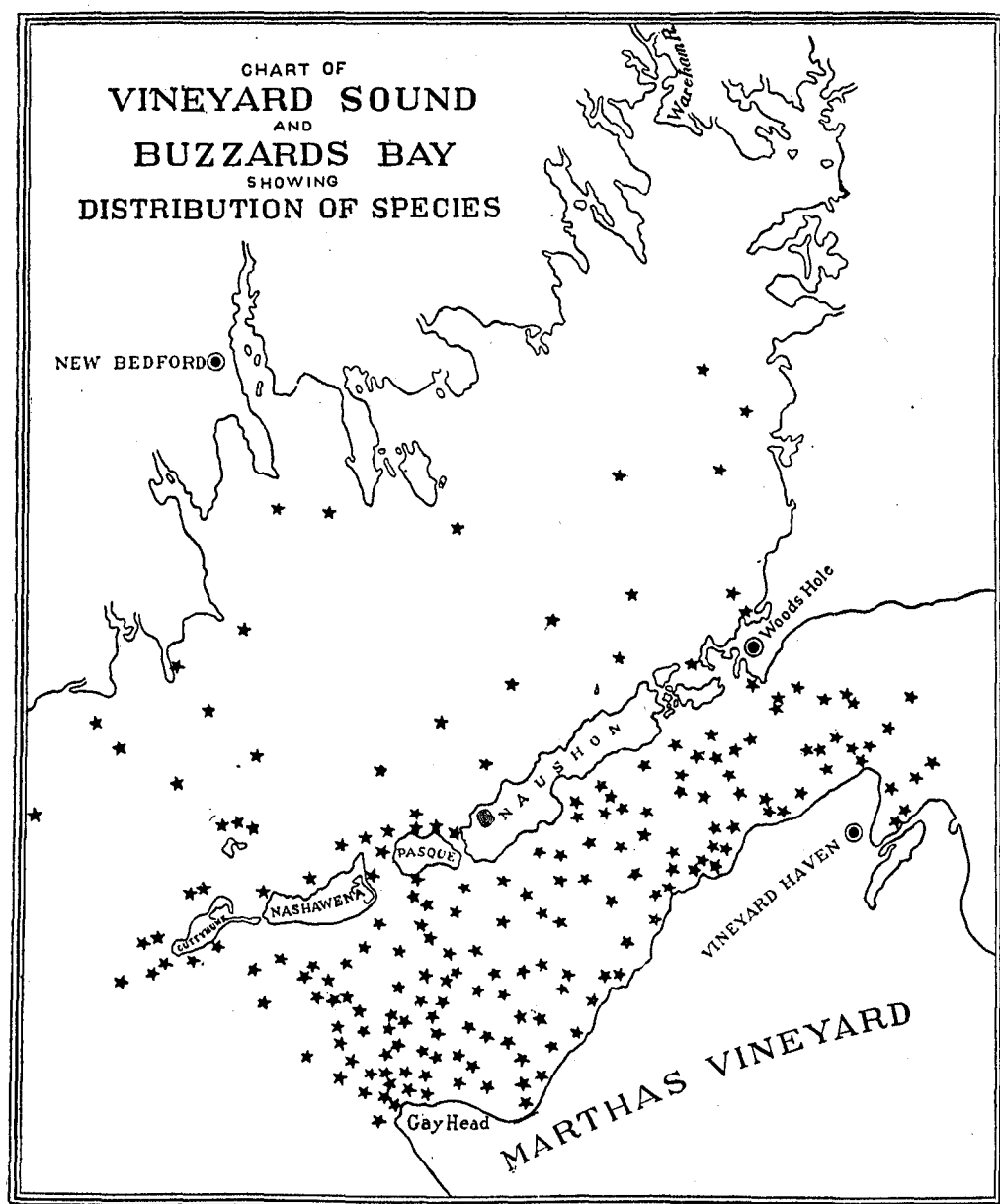
CHART III.—*Pagurus longicarpus*.

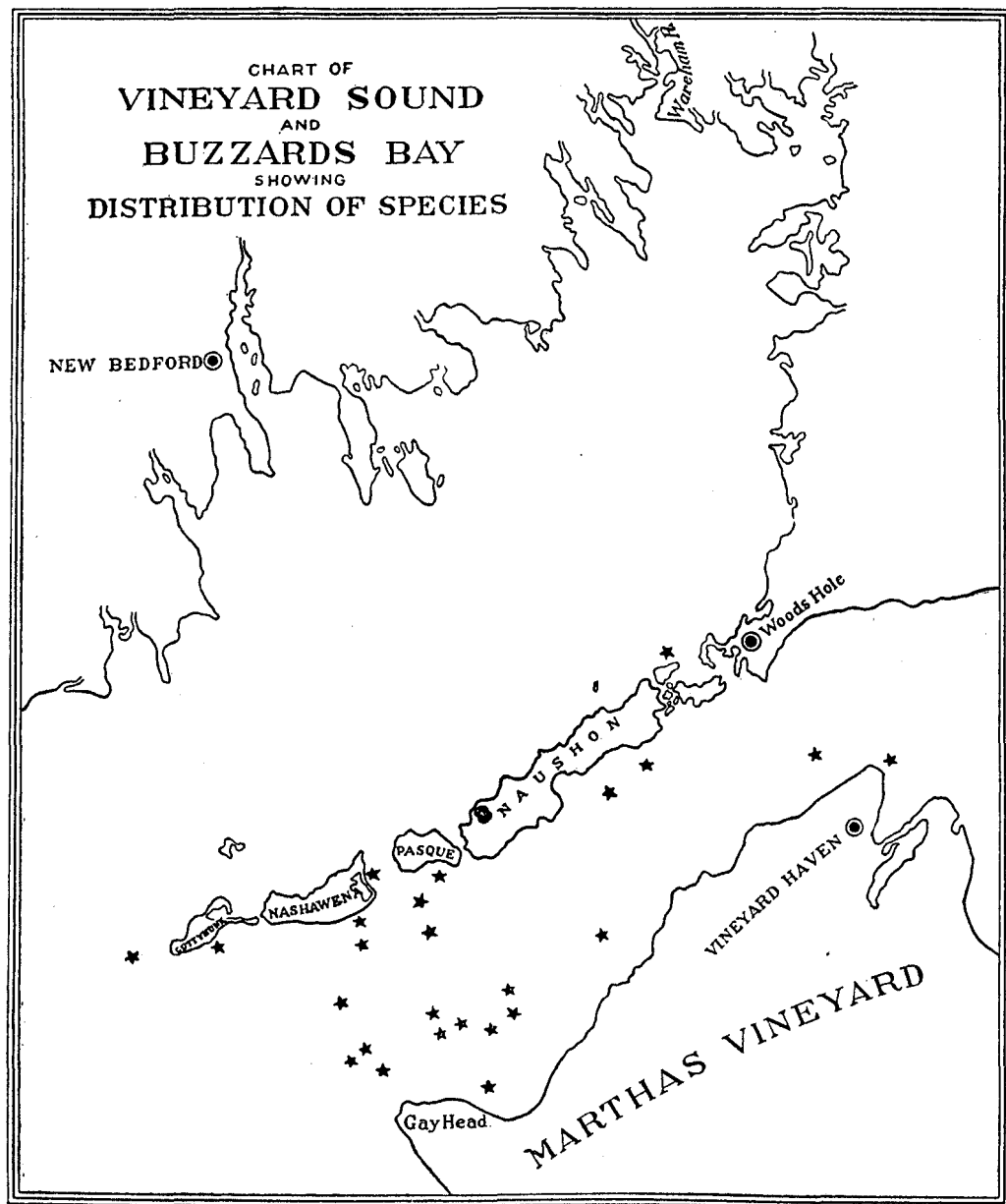
CHART 112.—*Pagurus annulipes*.

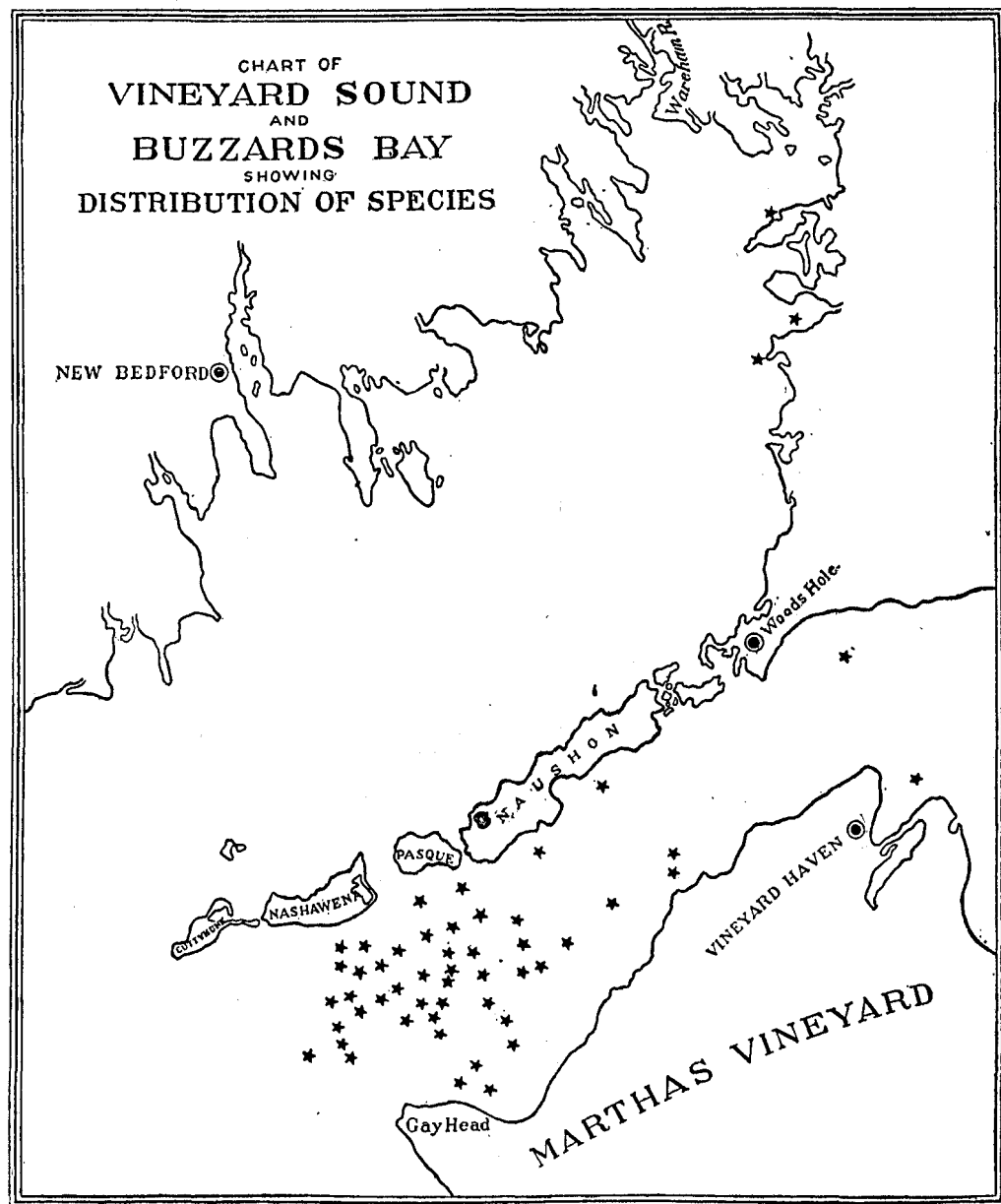


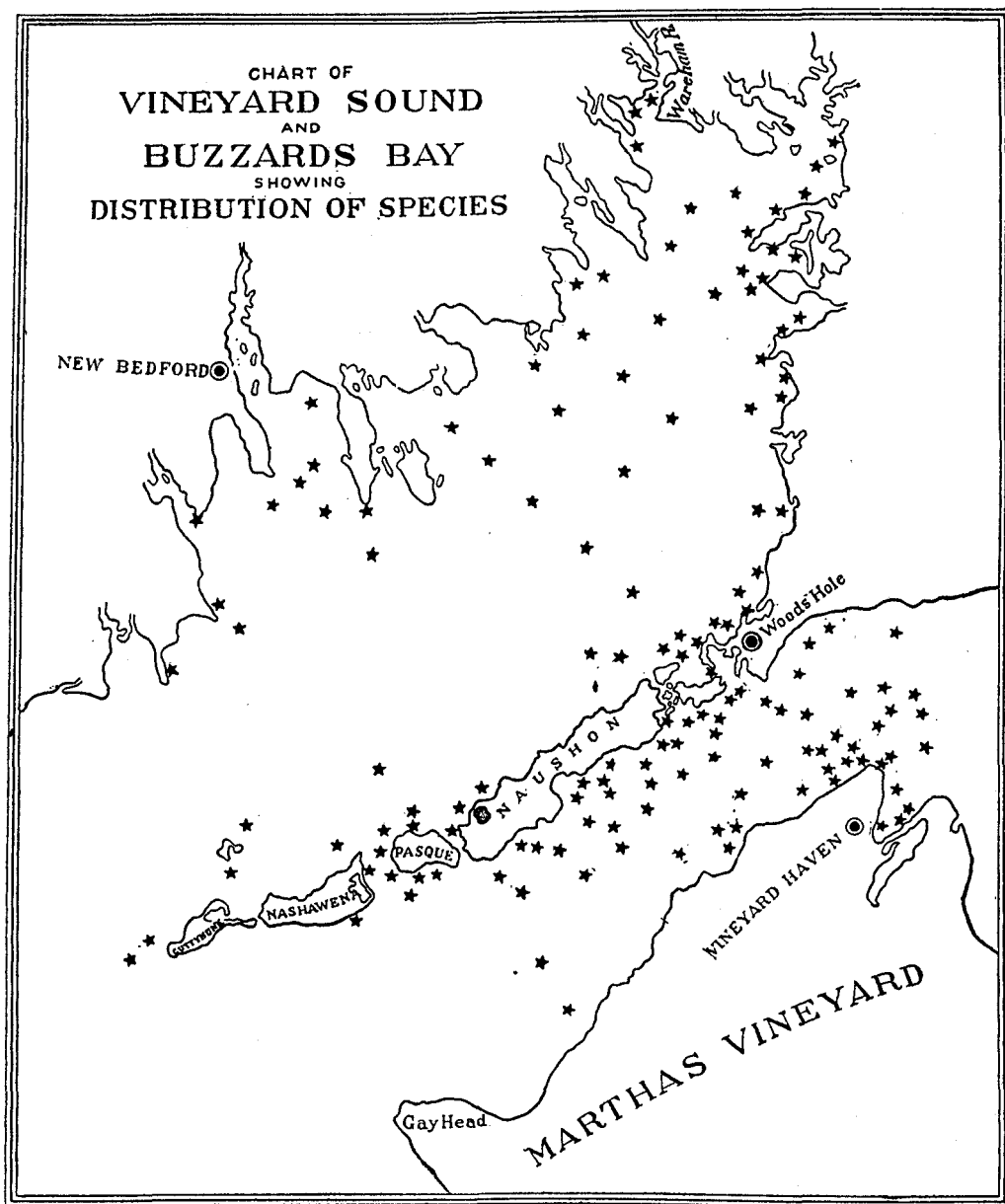
CHART 113.—*Pelia mutica*.

CHART 114.—*Libinia emarginata*.

CHART 115.—*Cancer irroratus*.

CHART 1116.—*Cancer borealis*.

CHART 117.—*Ovalipes ocellatus*.

CHART 118.—*Neopanope texana sayi*.

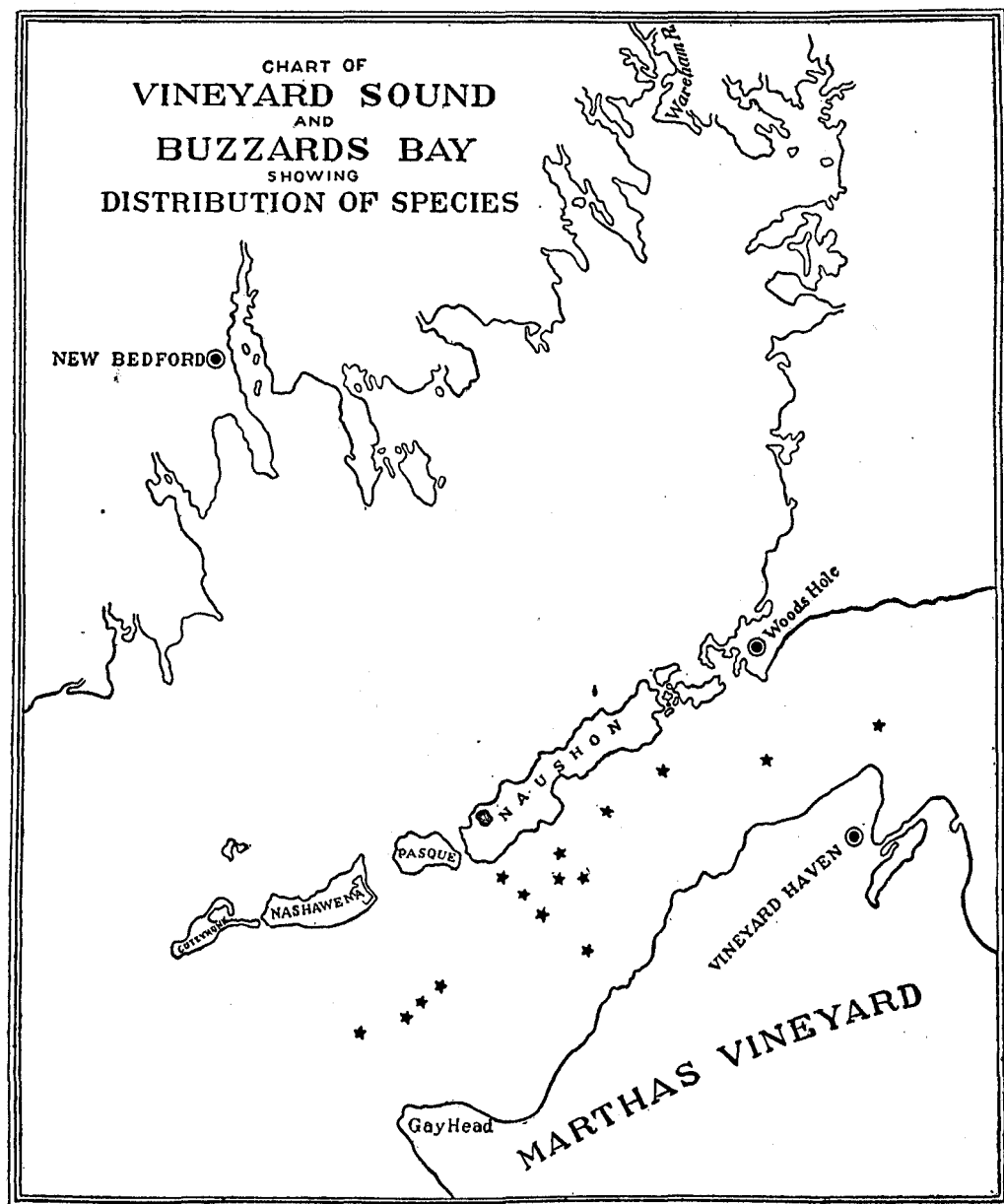
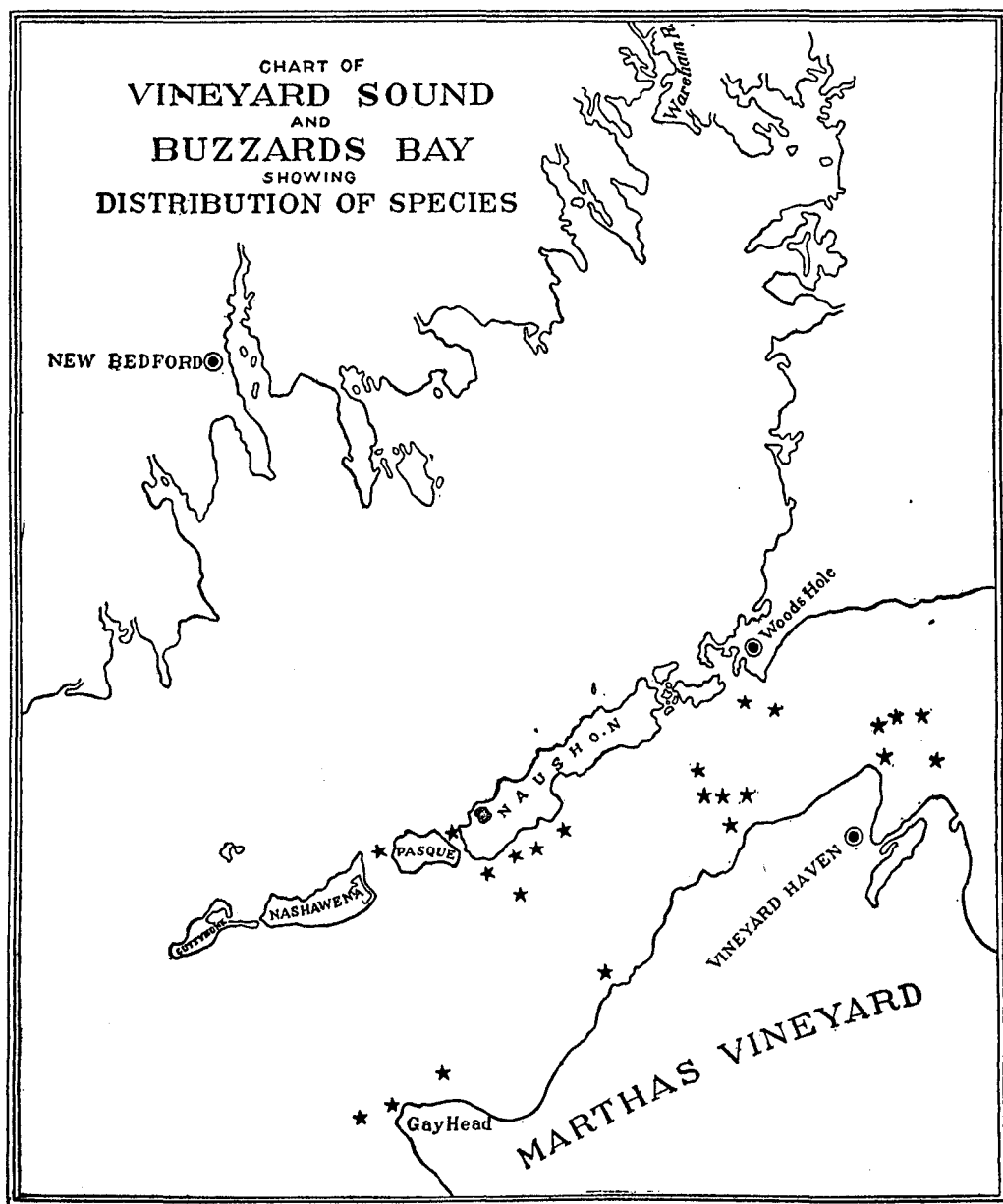
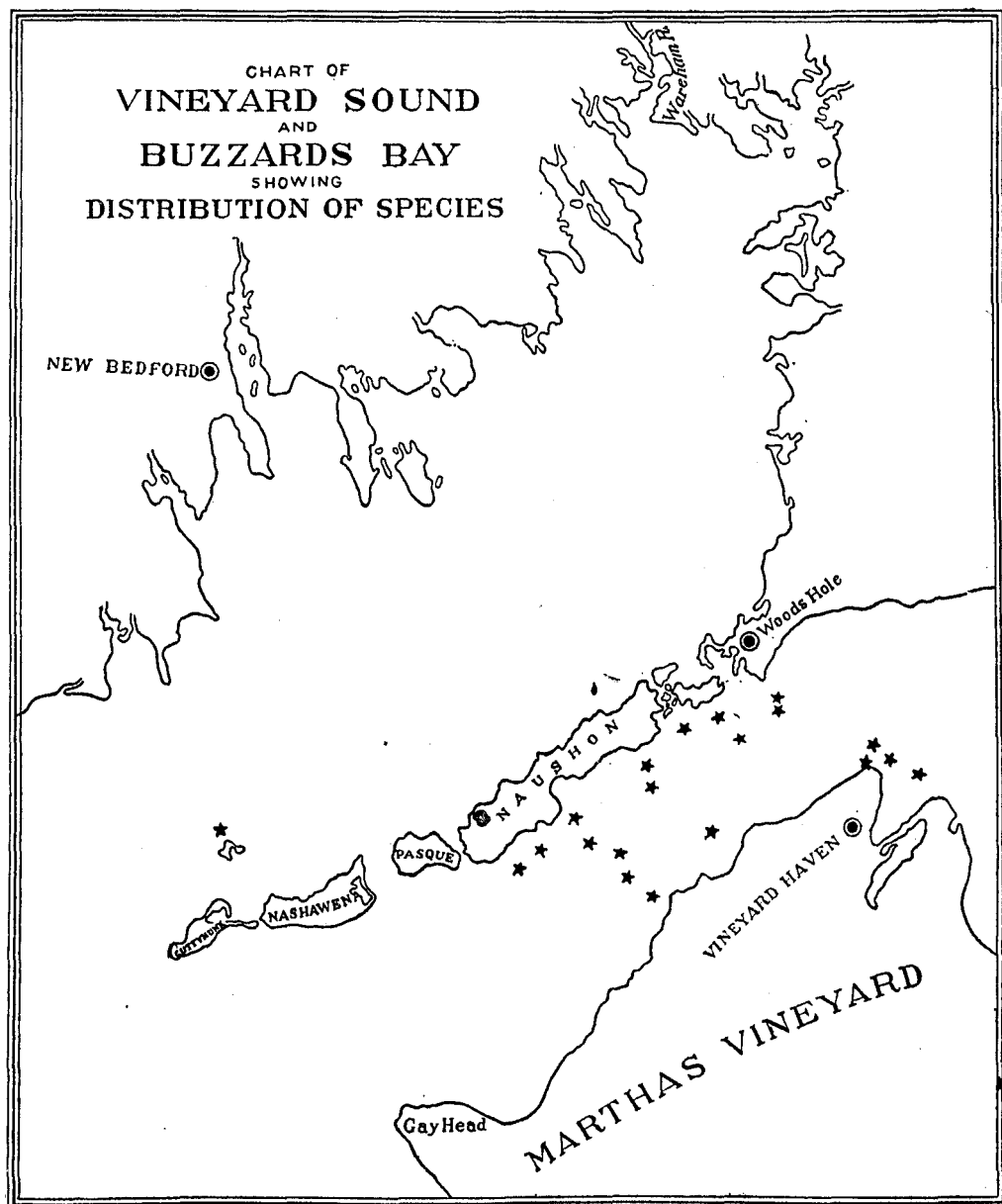


CHART 119.—*Pinnotheres maculatus*.

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CHART 120.—*Tanystylum orbiculare*.



CHART 121.—*Anoplodactylus lentus*.

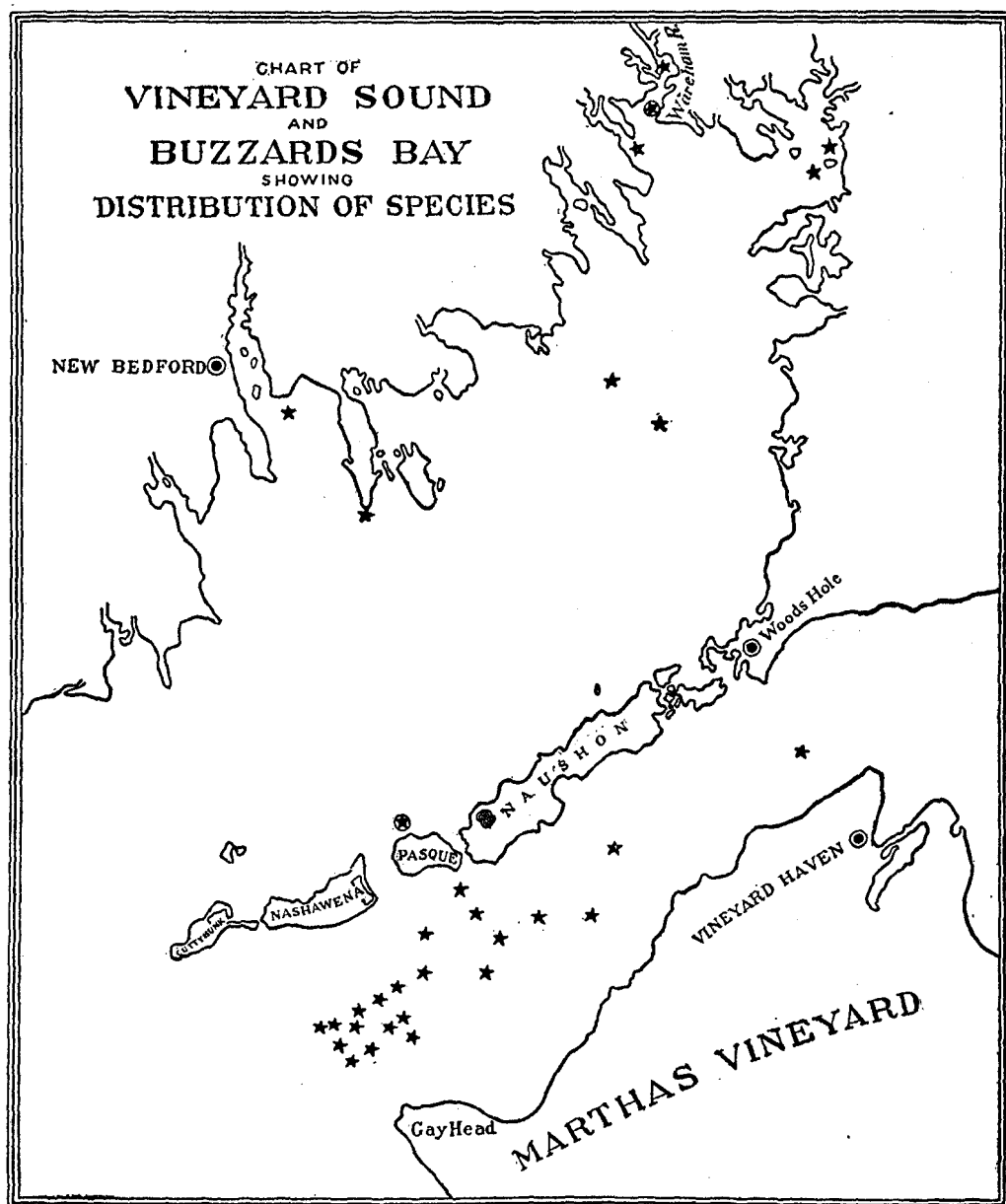
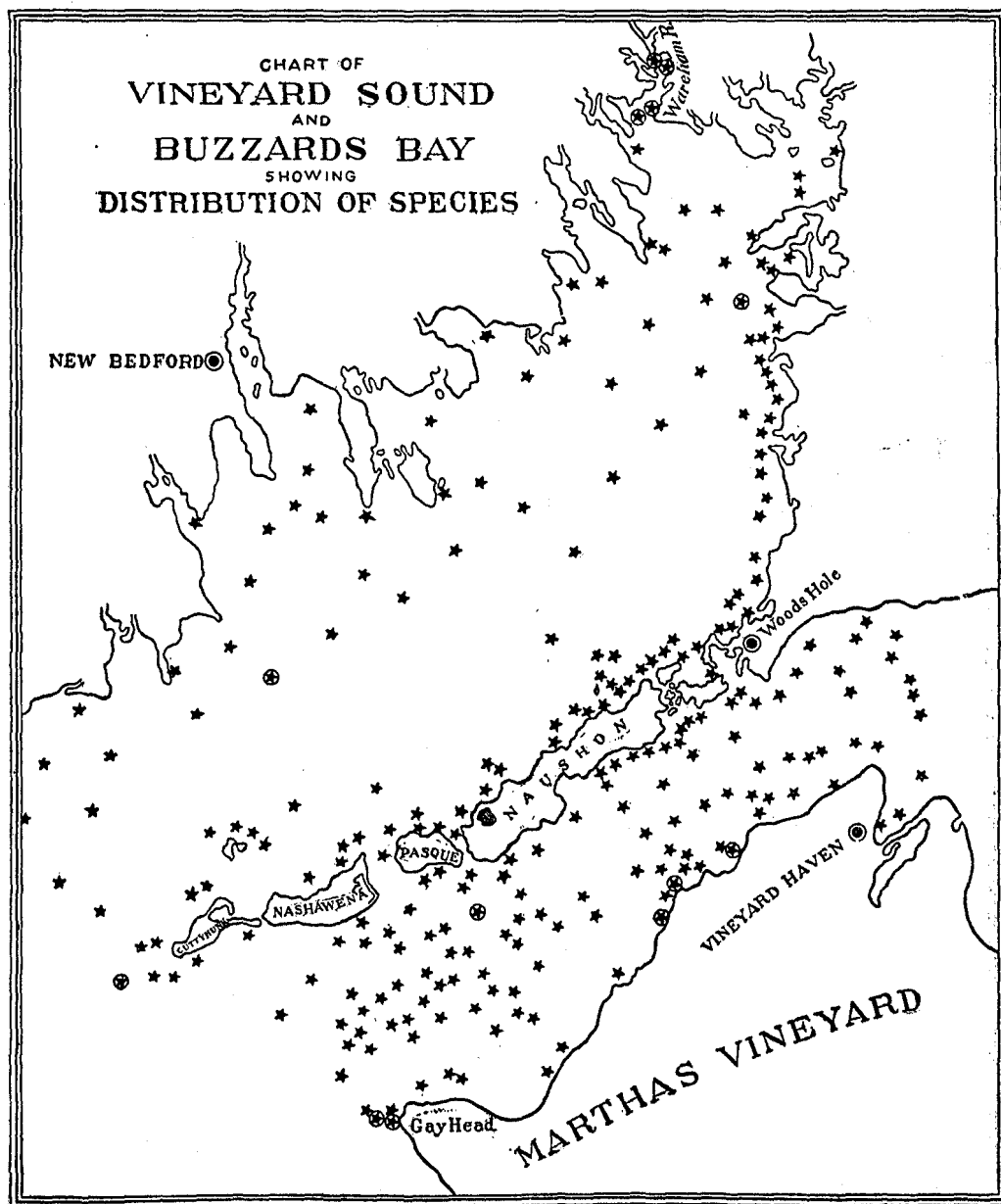
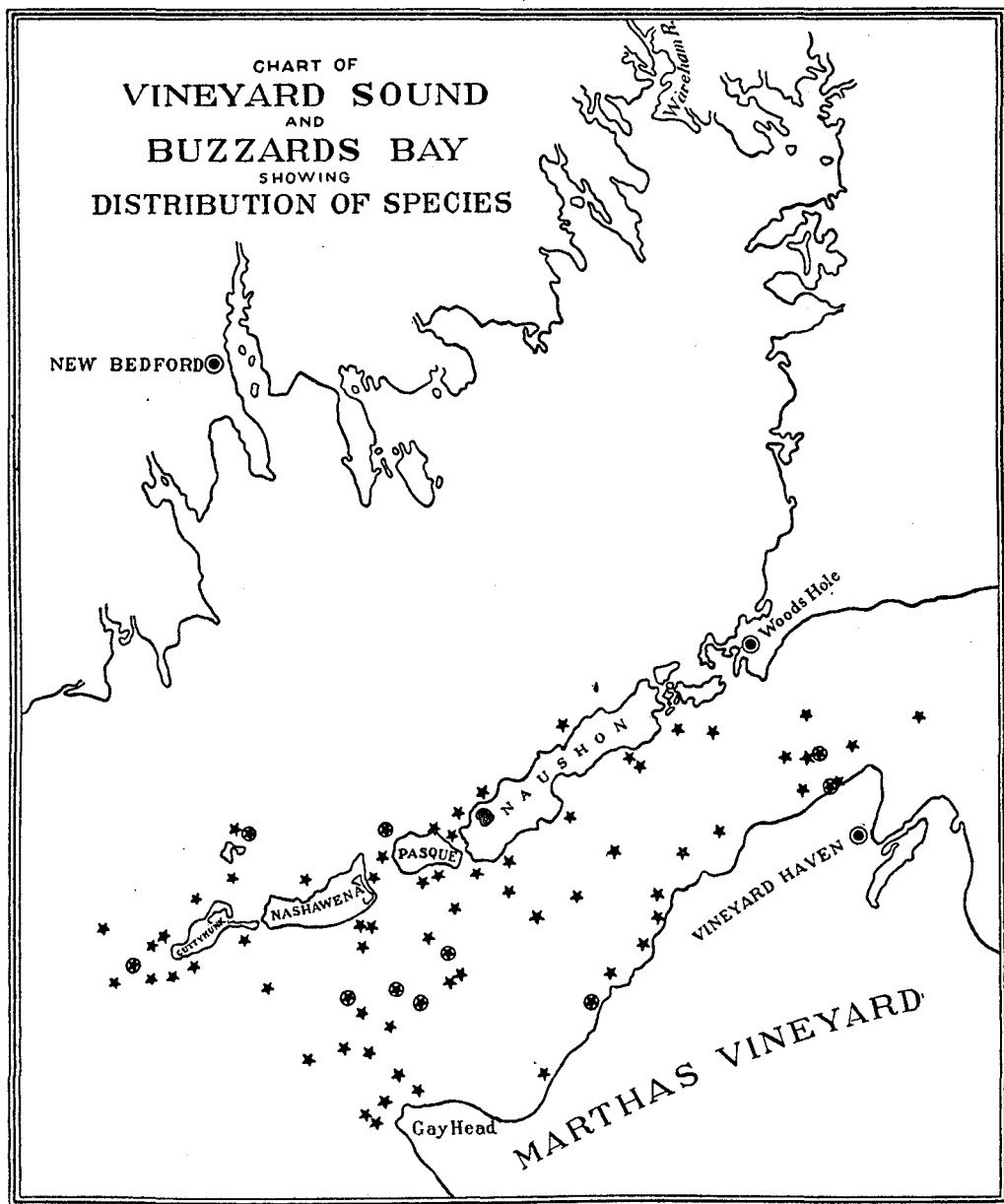
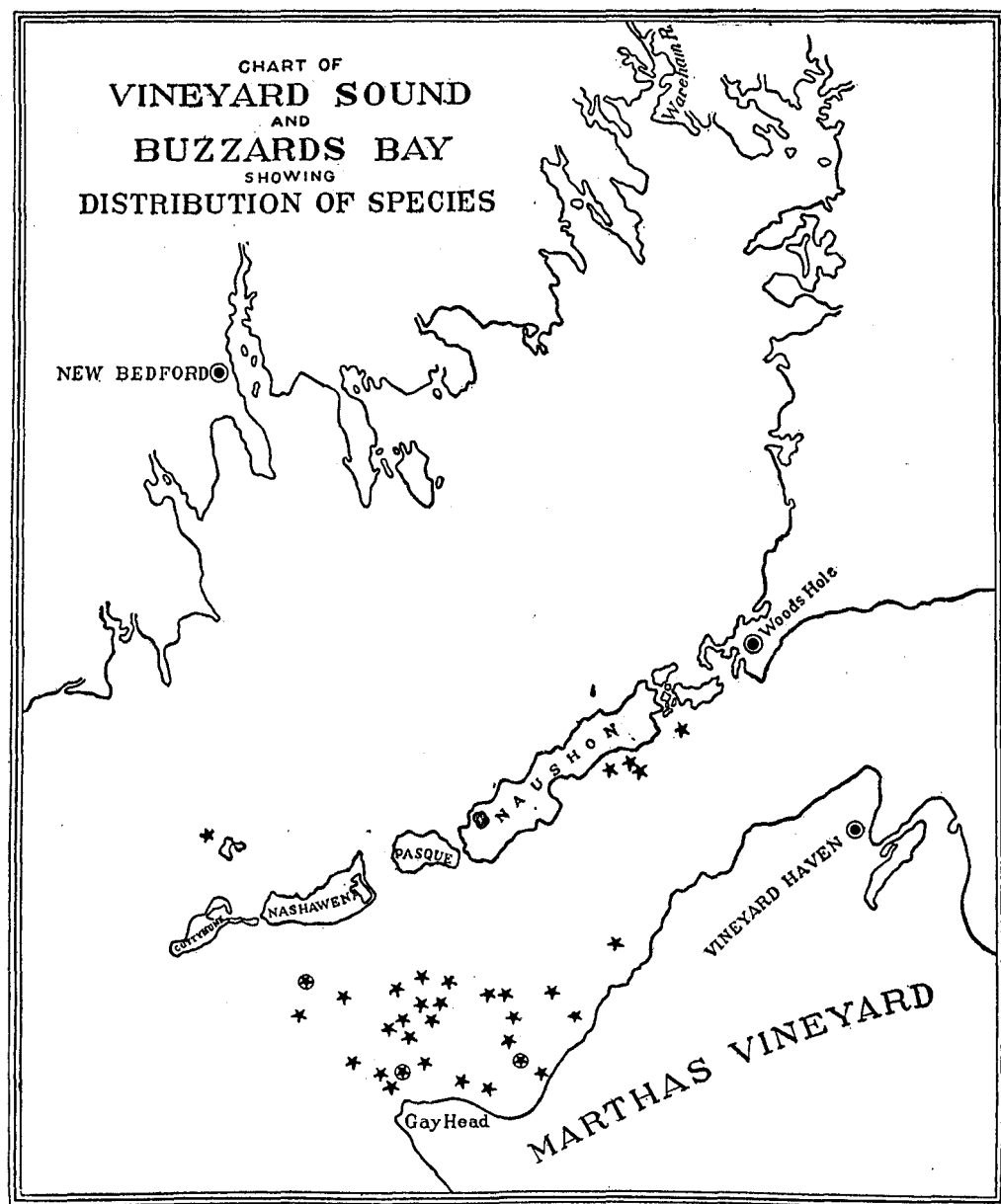


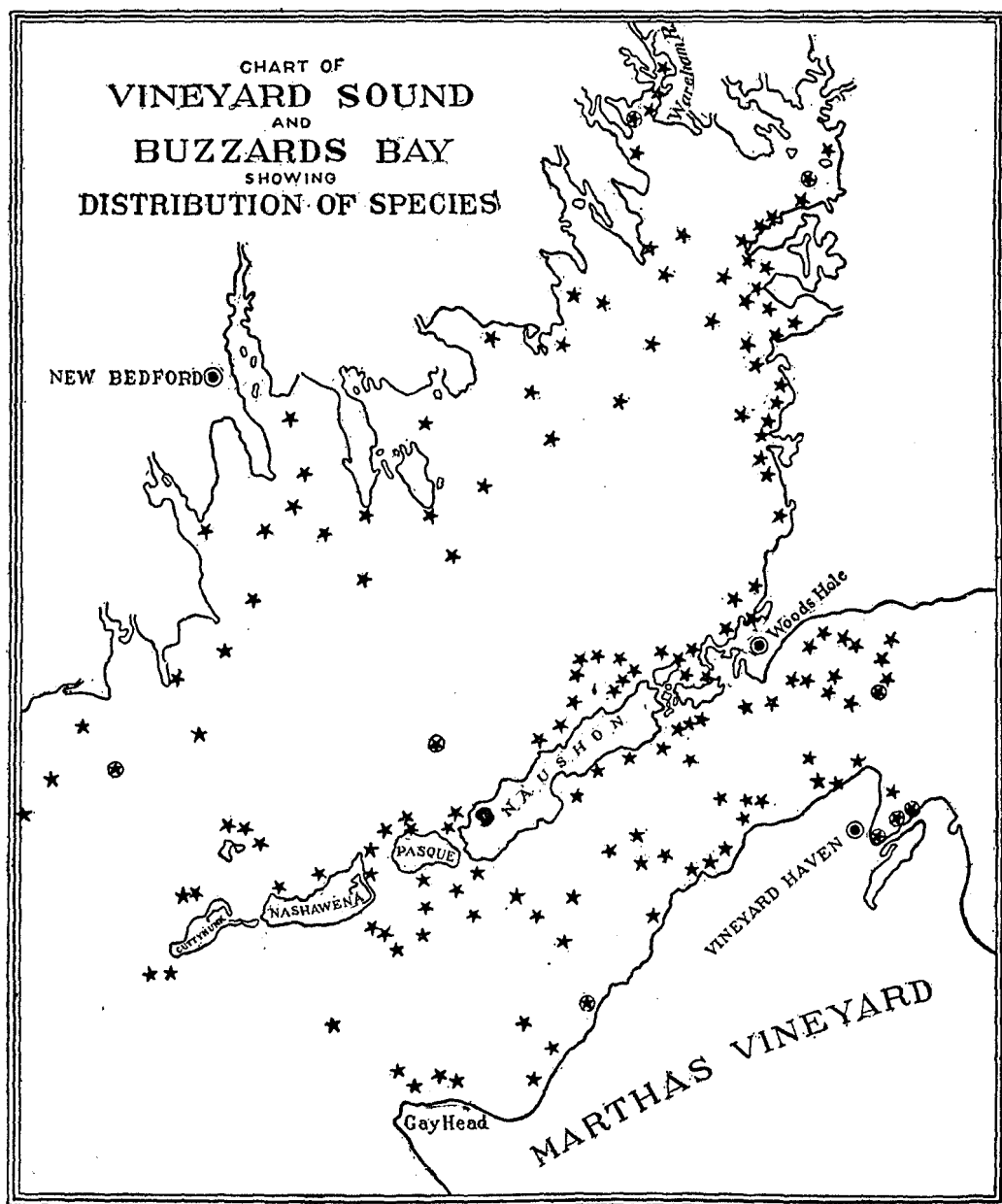
CHART 122.—*Ostrea virginica*. (See explanation of chart 26.)

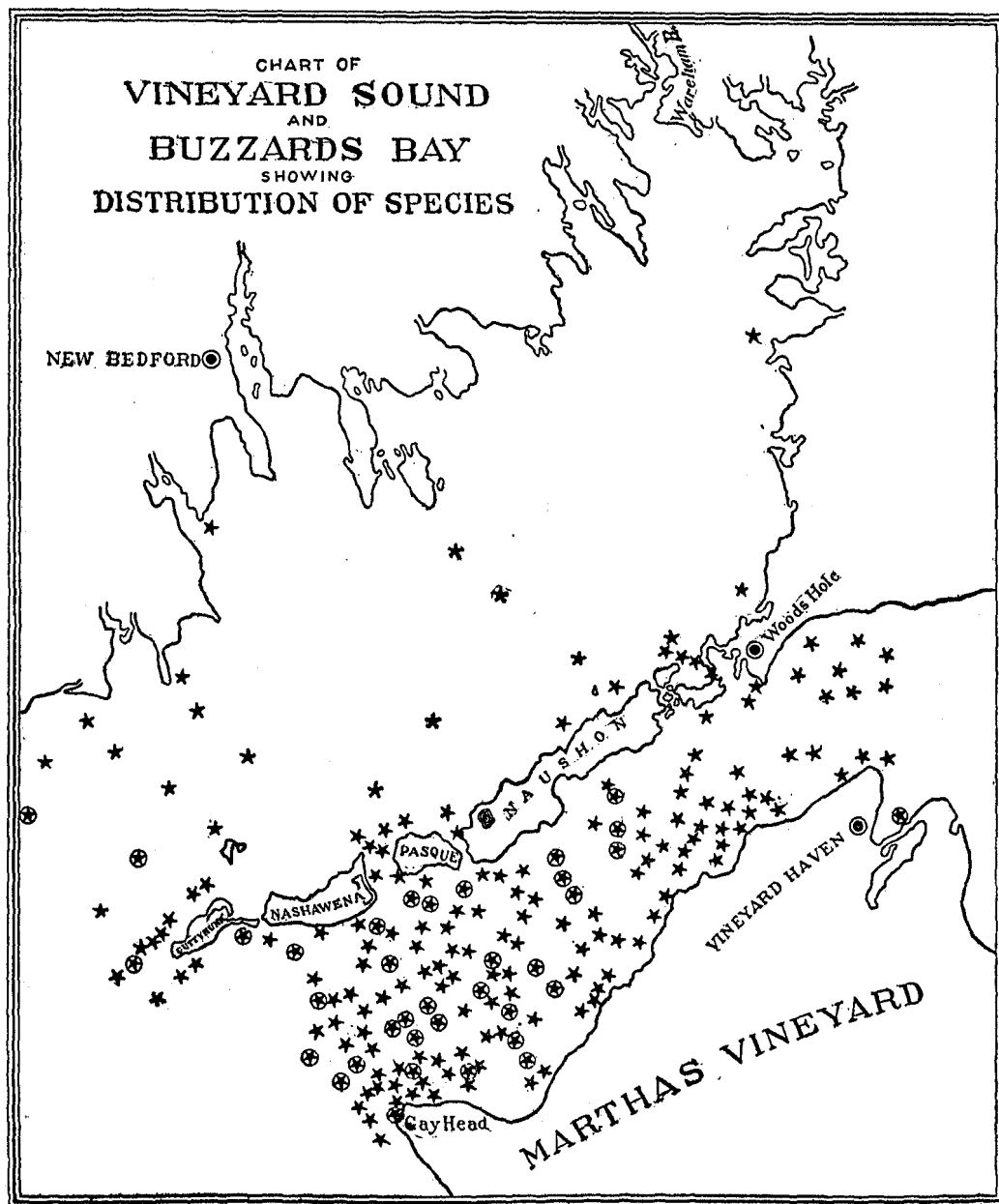
The distribution pattern for the oyster, as here portrayed, is largely a spurious one, due to the occurrence of shells thrown overboard from passing vessels.

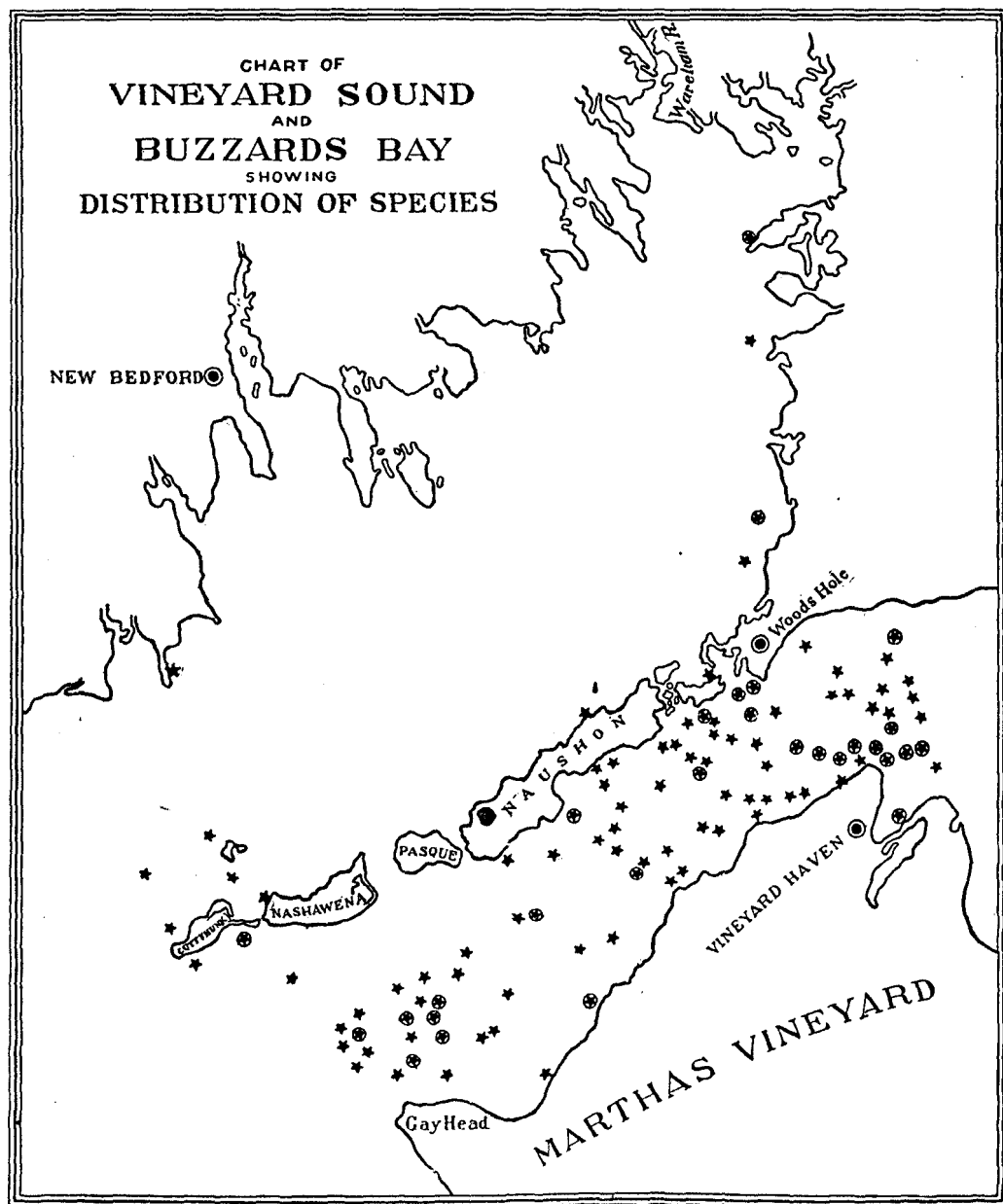
CHART 123.—*Anomia simplex*. (See explanation of chart 26.)

CHART 124.—*Anomia aculeata*. (See explanation of chart 26.)

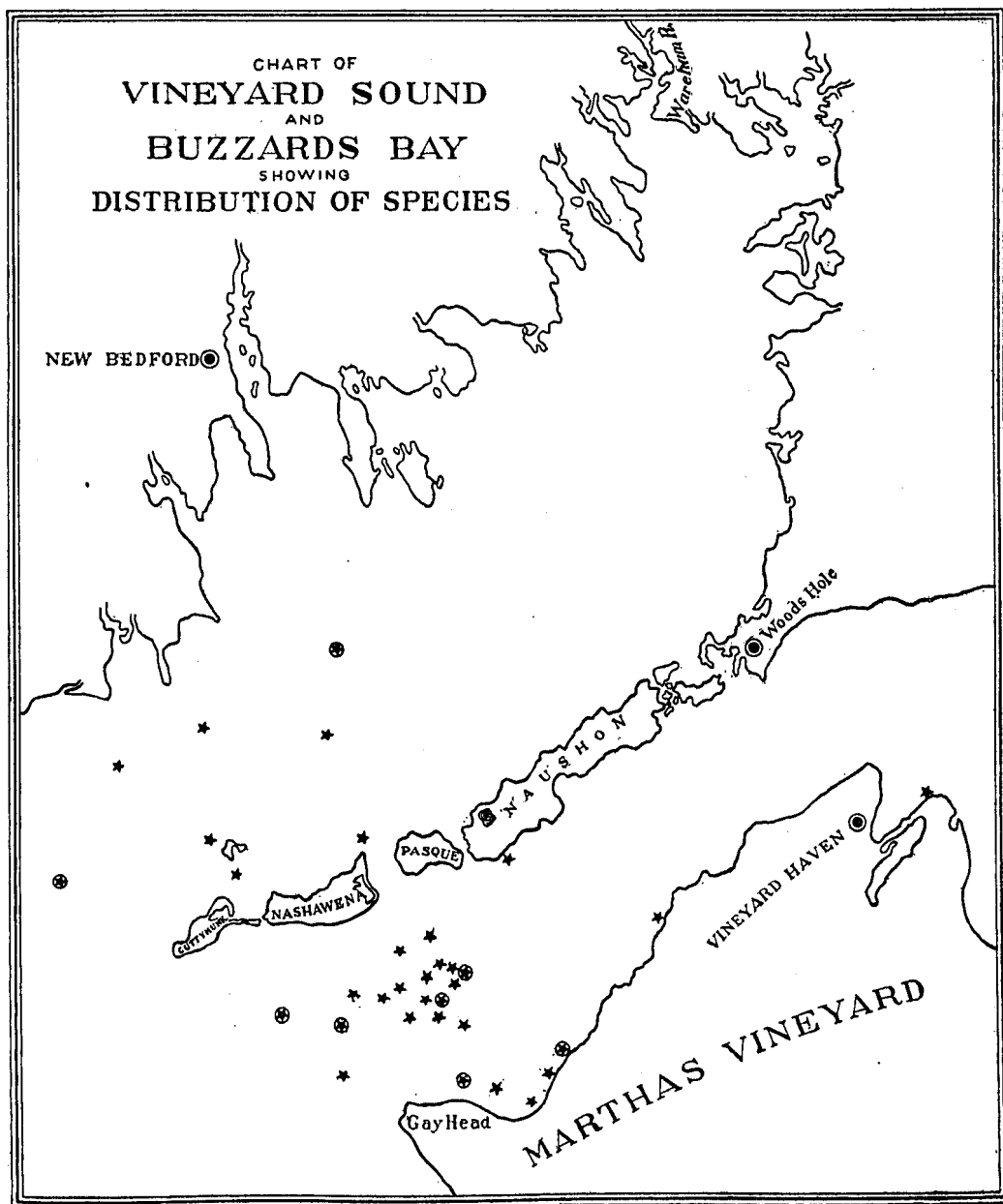
CHART 125.—*Pecten magellanicus*. (See explanation of chart 26.)

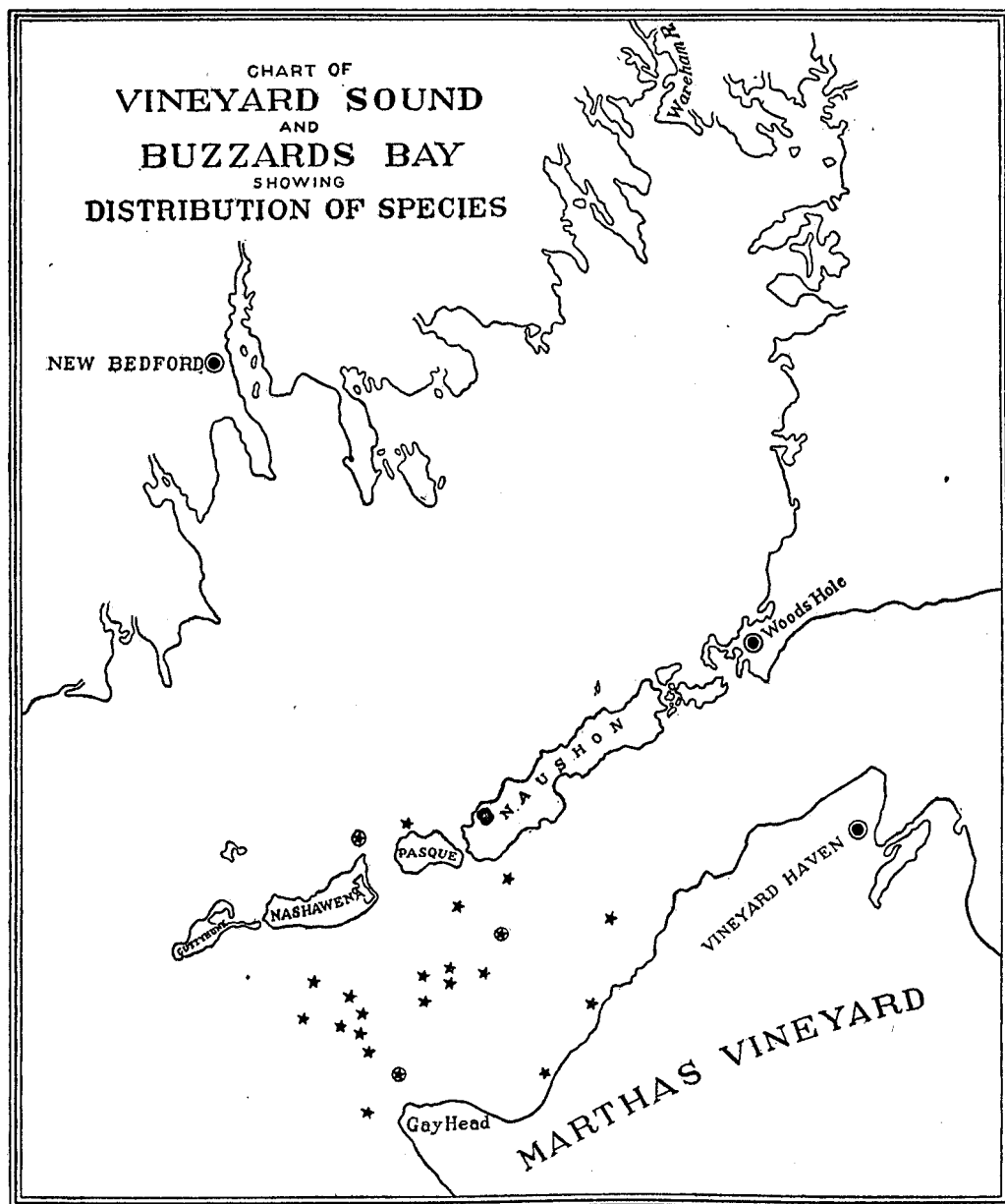
CHART 126.—*Pecten gibbus borealis*. (See explanation of chart 26.)

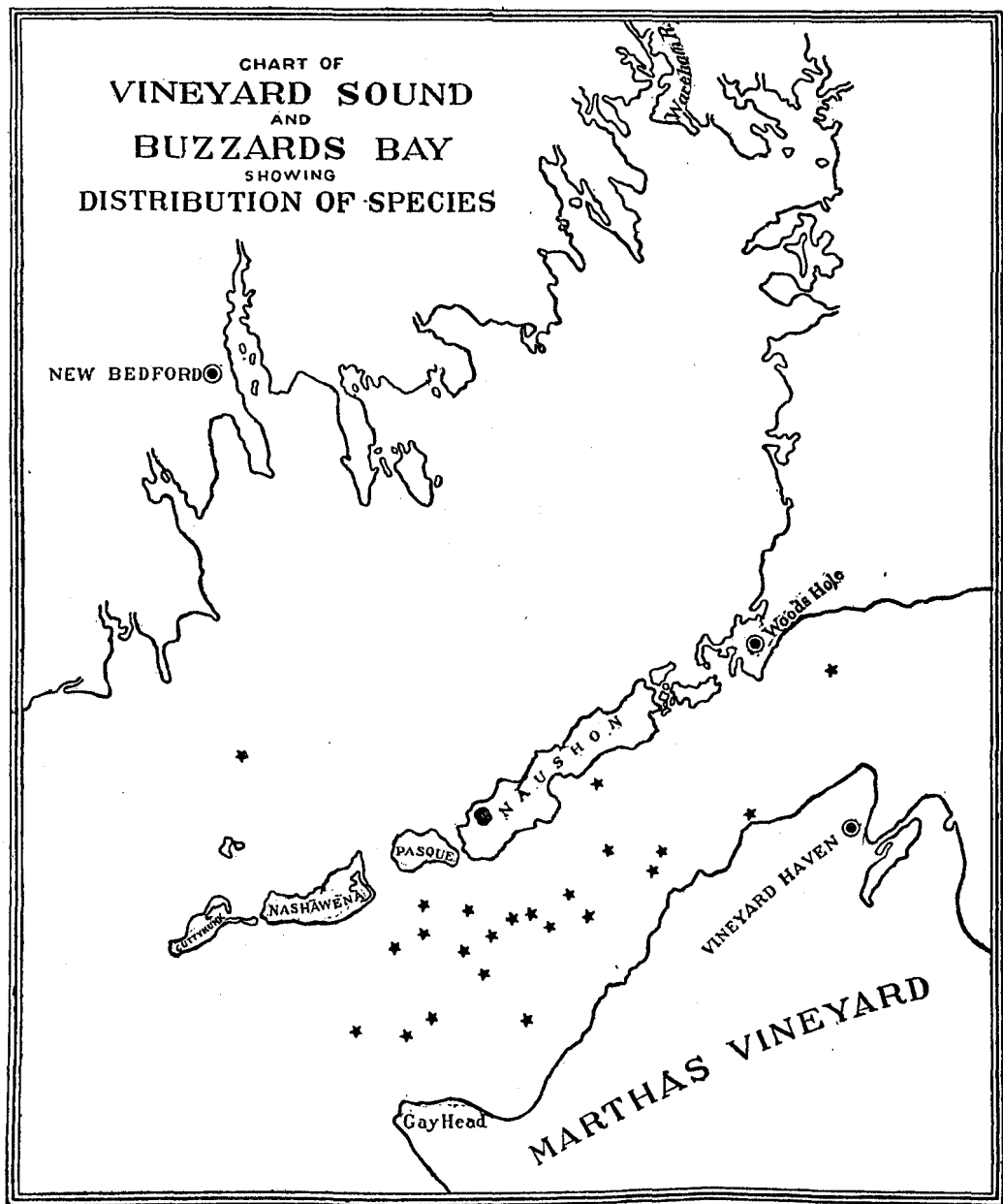
CHART 127.—*Mytilus edulis*. (See explanation of chart 26.)

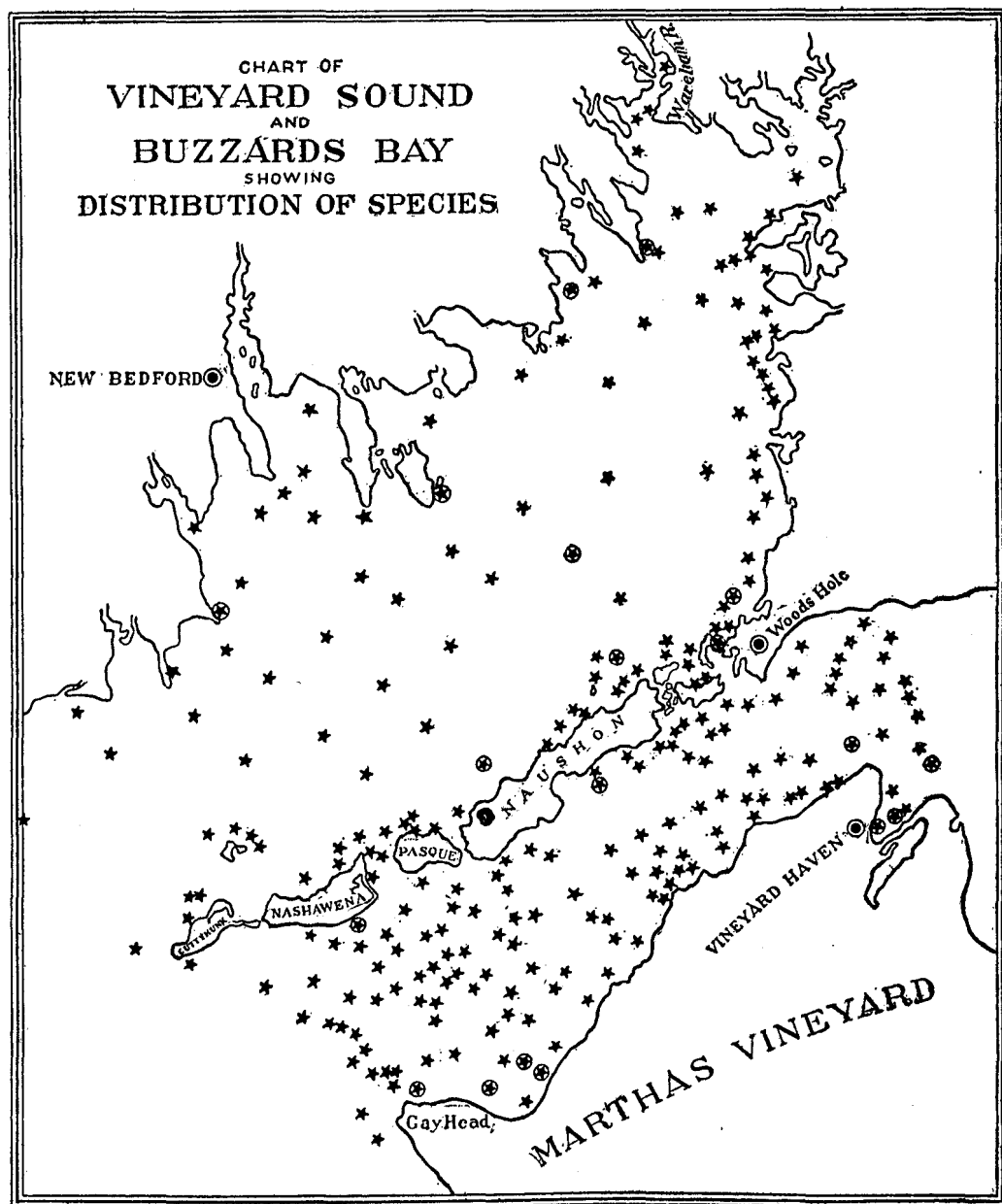
CHART 128.—*Modiolus modiolus*. (See explanation of chart 26.)



CHART 129.—*Modiolaria nigra*. (See explanation of chart 26.)

CHART 130.—*Crenella glandula*. (See explanation of chart 26.)

CHART 131.—*Arca ponderosa*. (See explanation of chart 26.)

CHART 132.—*Arca transversa*. (See explanation of chart 26.)

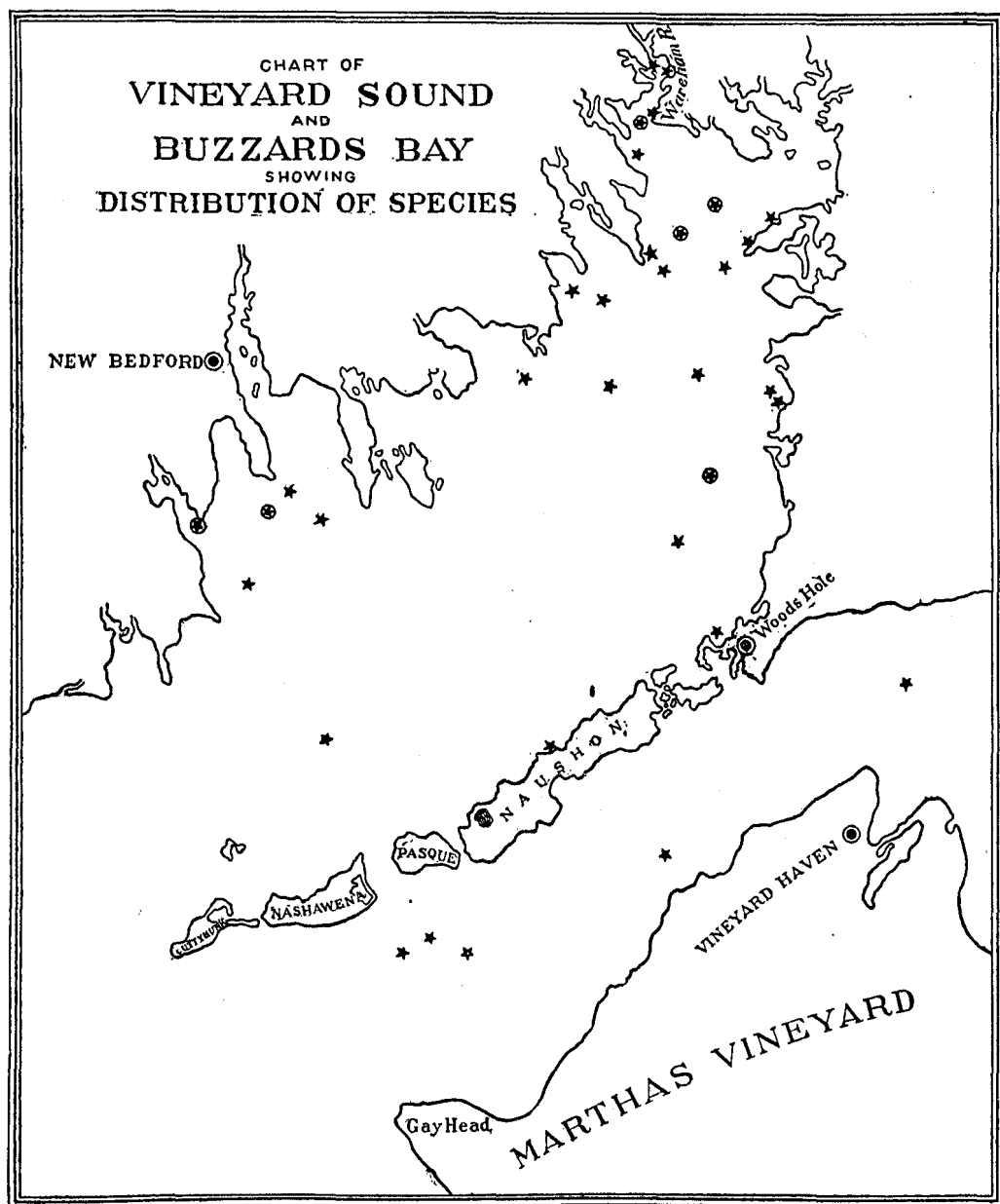
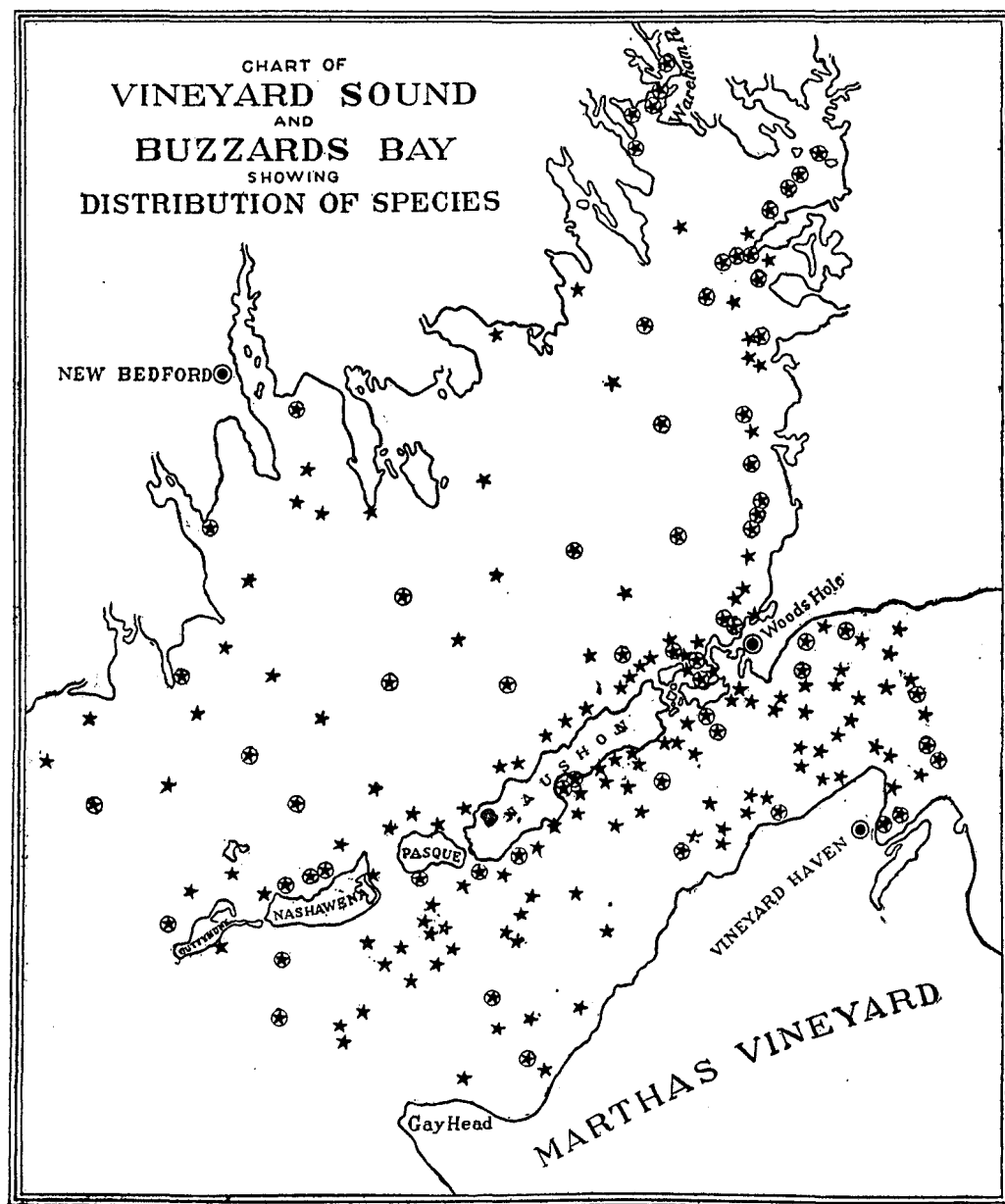


CHART 133.—*Arca campechiensis pexata*. (See explanation of chart 26.)

CHART 134.—*Nucula proxima*. (See explanation of chart 26.)

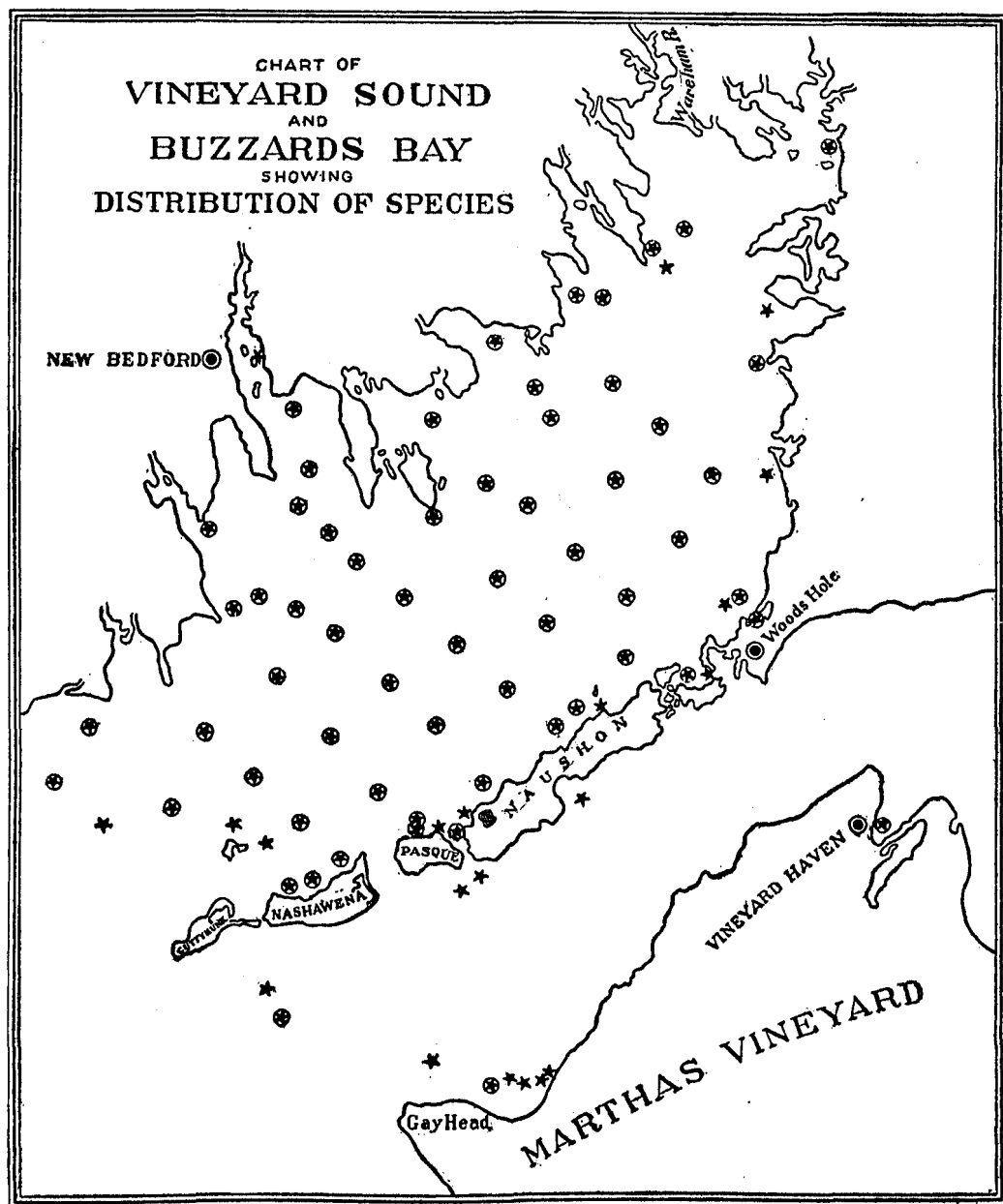
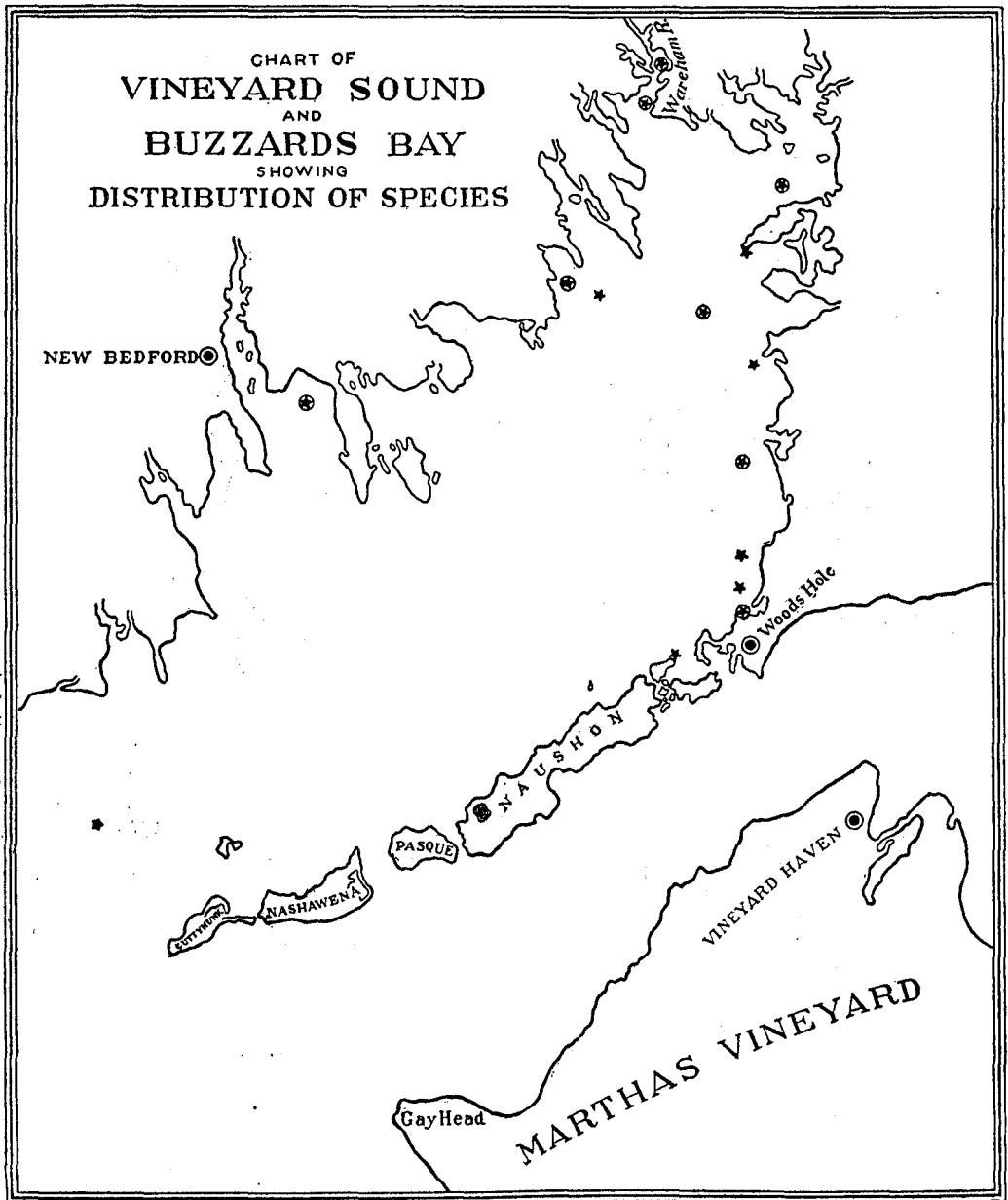
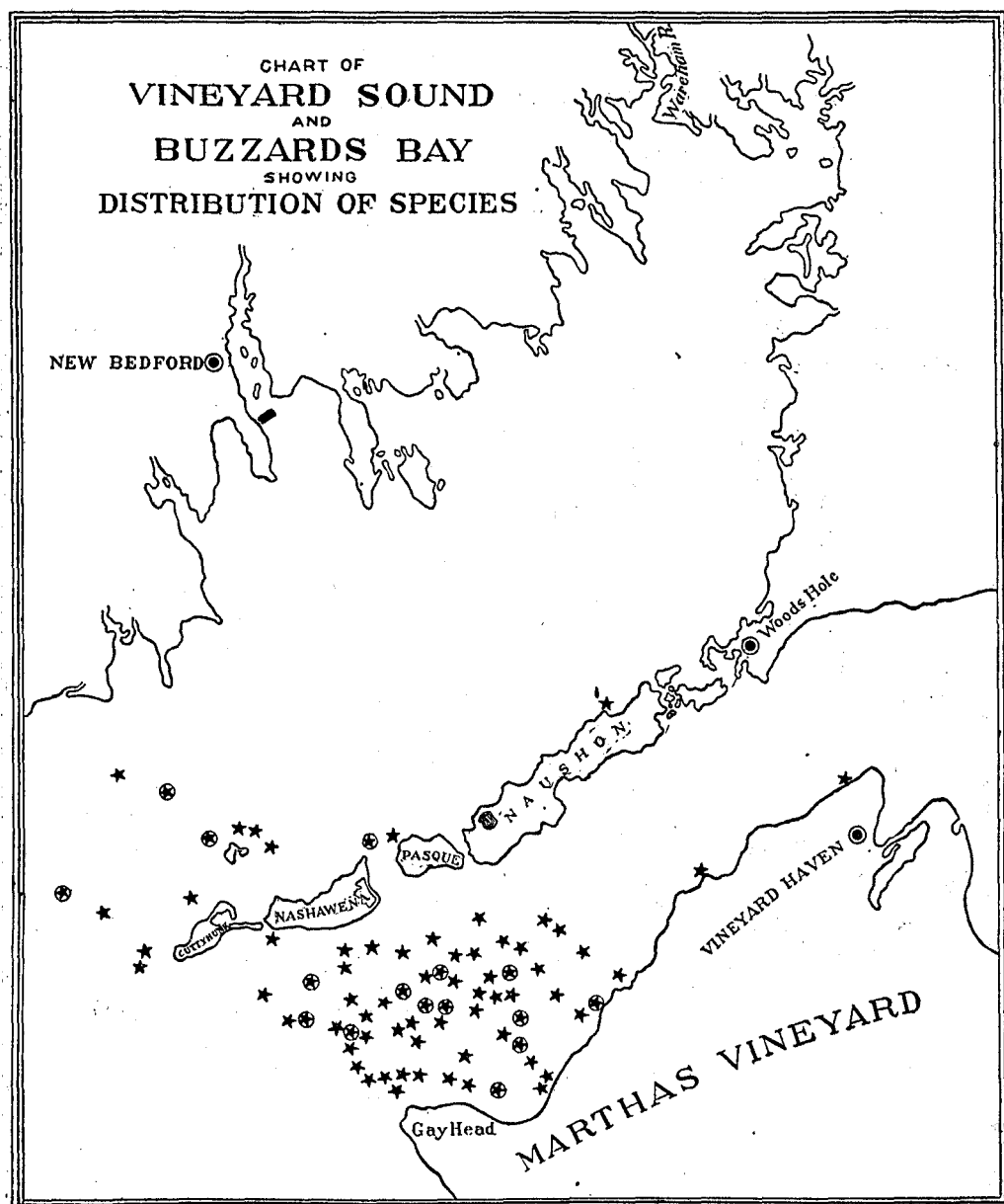
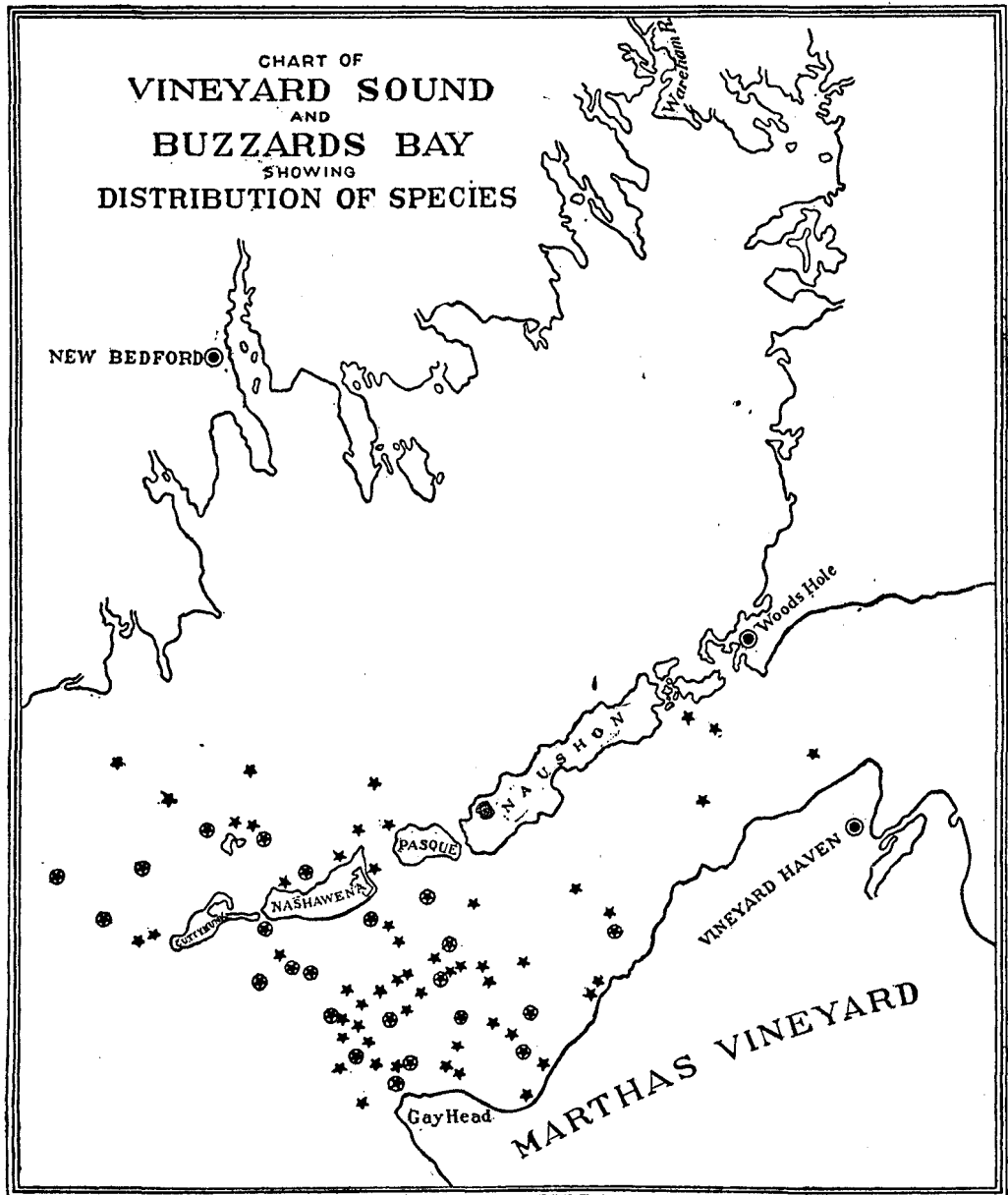


CHART 135.—*Yoldia limatula*. (See explanation of chart 26.)  
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CHART 136.—*Solemya velum*. (See explanation of chart 26.)



CHART 137.—*Venericardia borealis*. (See explanation of chart 26.)

CHART 138.—*Astarte undata*. (See explanation of chart 26.)

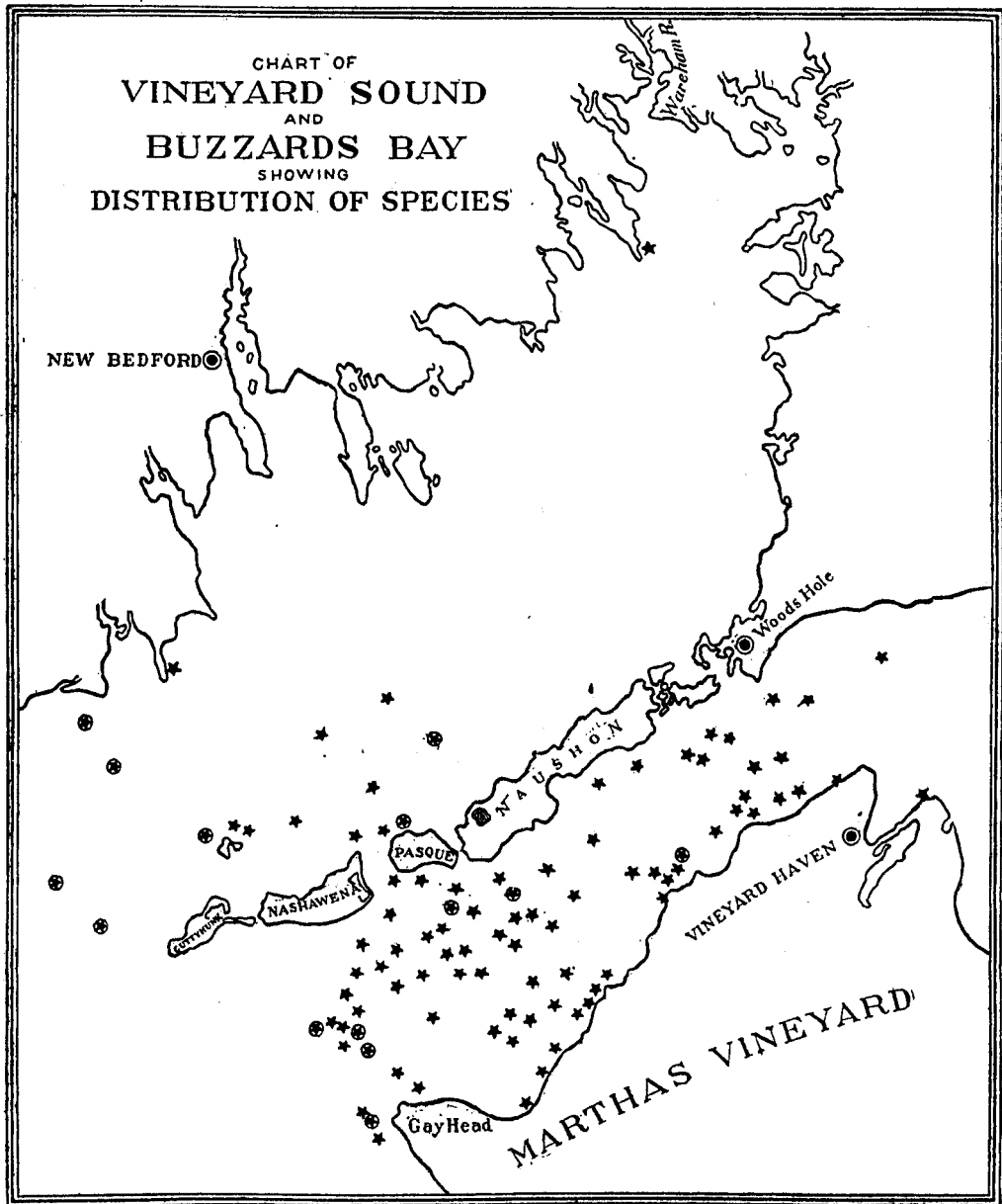
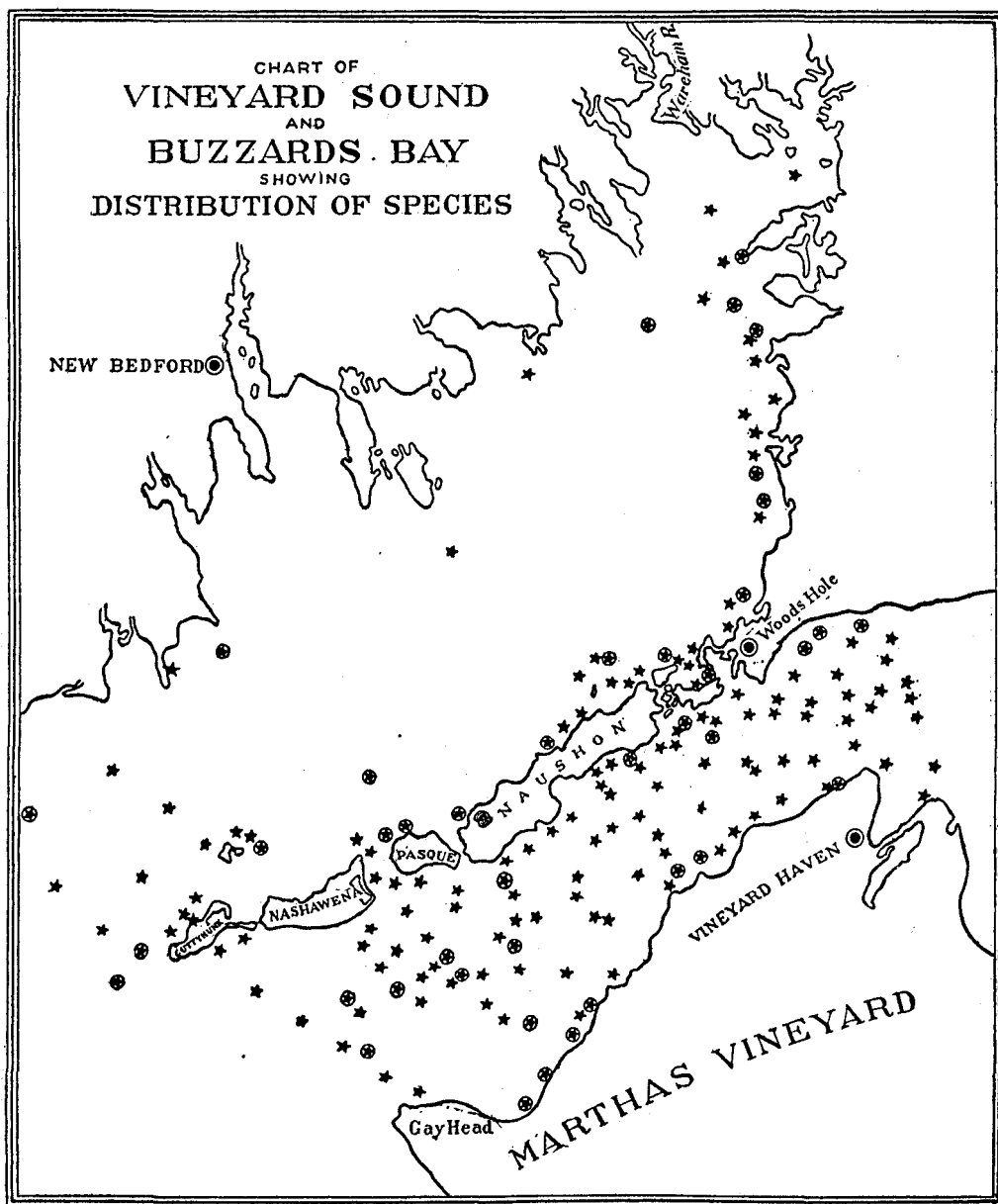


CHART 139.—*Astarte castanea*. (See explanation of chart 26.)

CHART 140.—*Crassinella mactracea*. (See explanation of chart 26.)

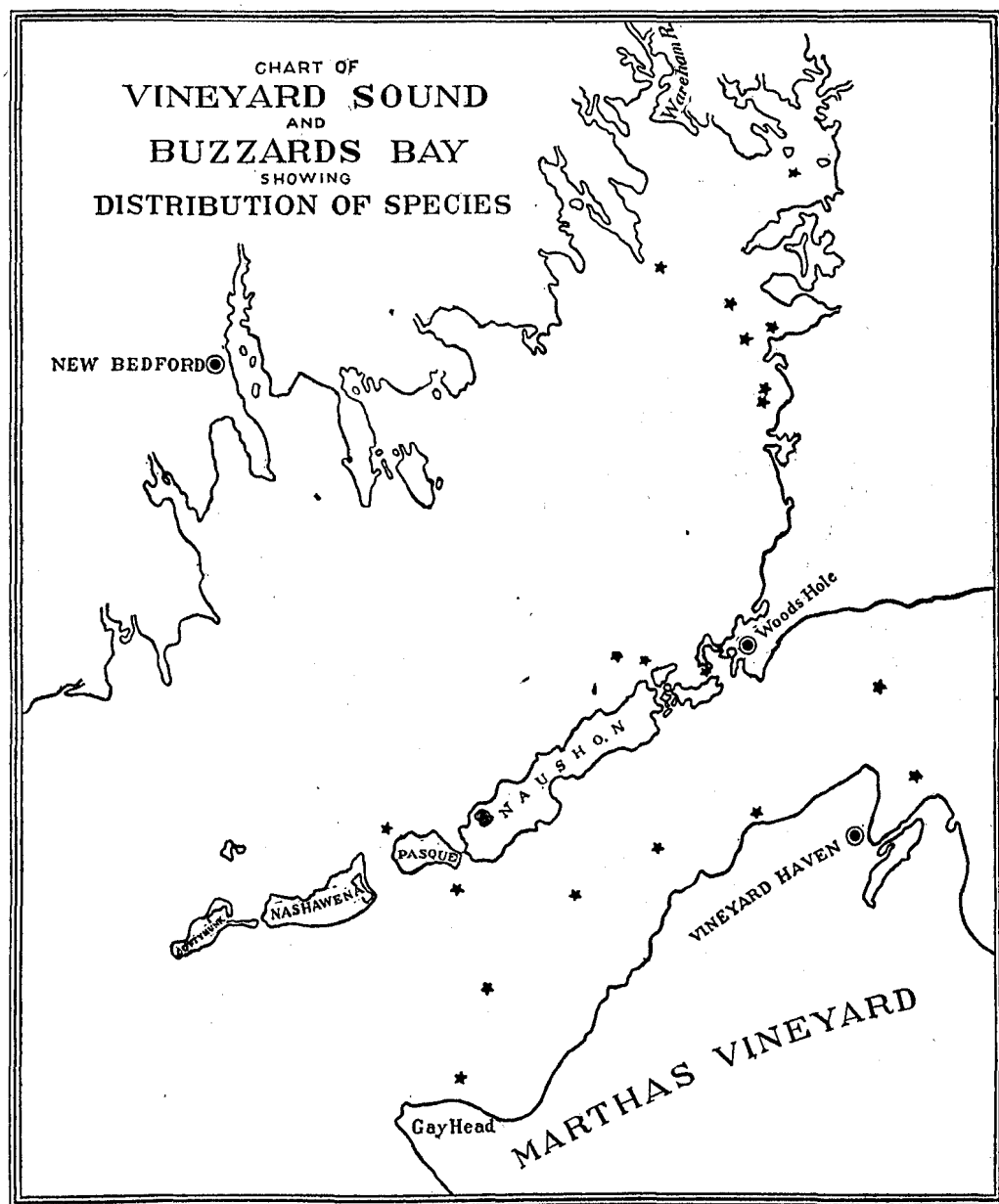
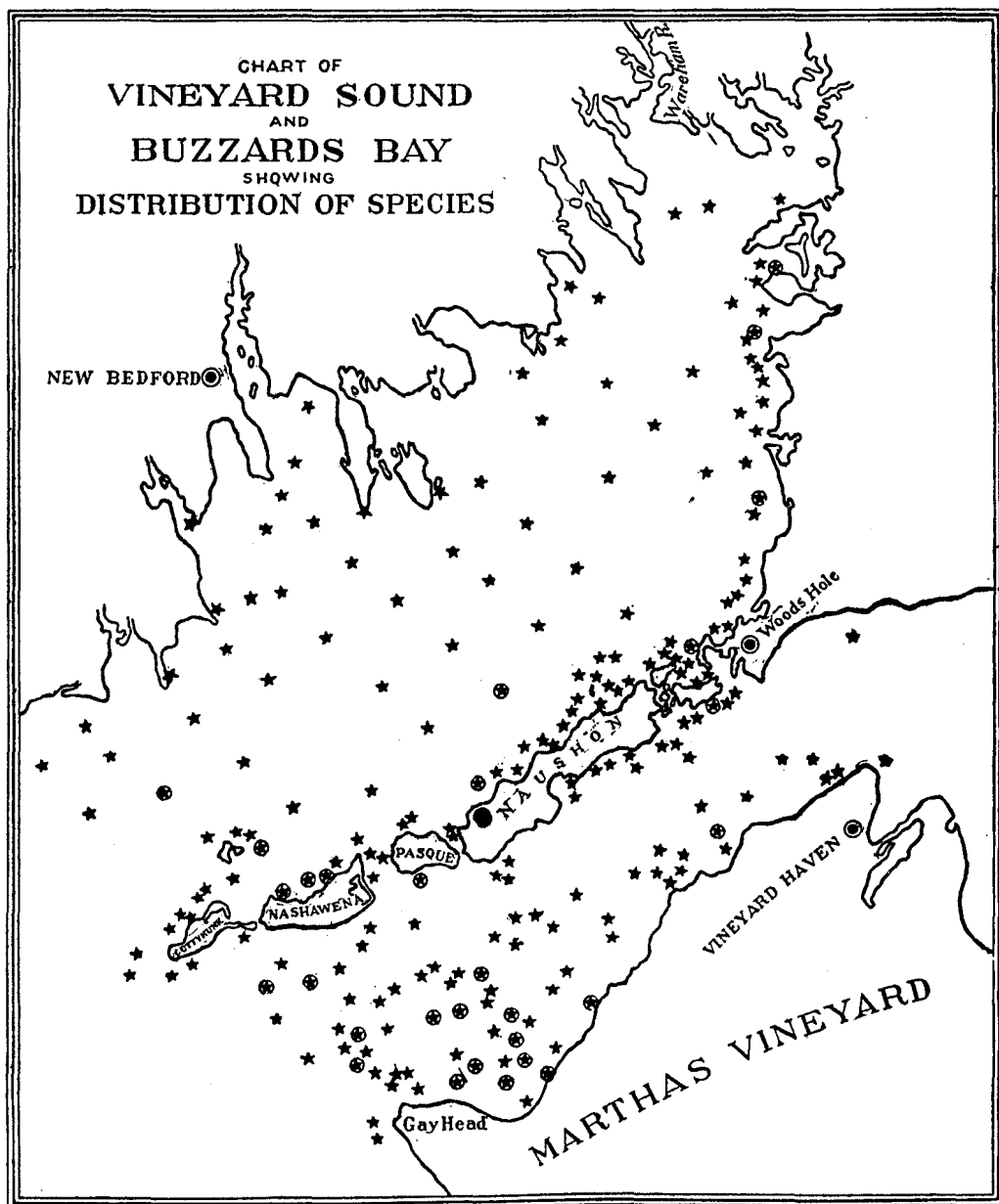
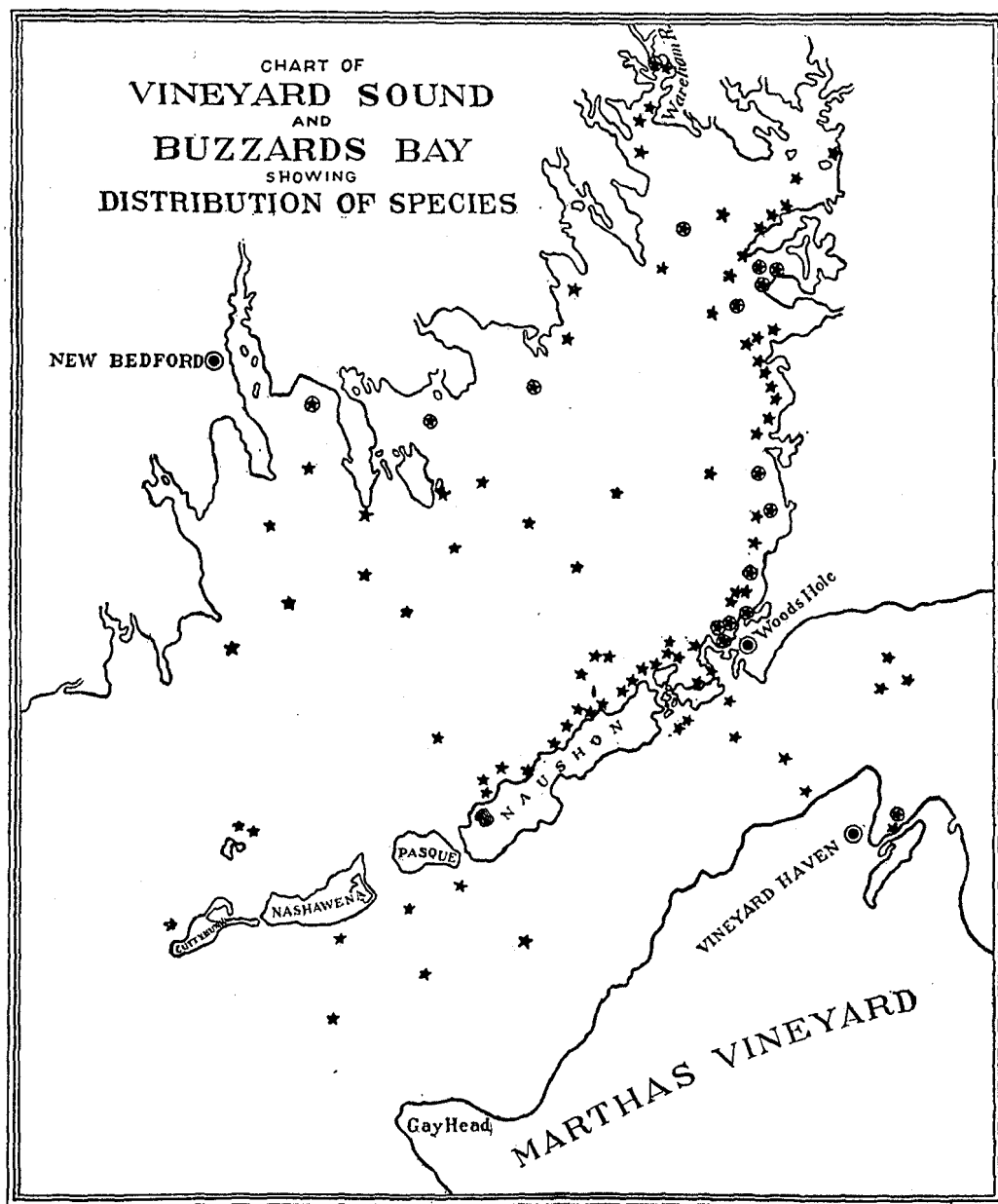
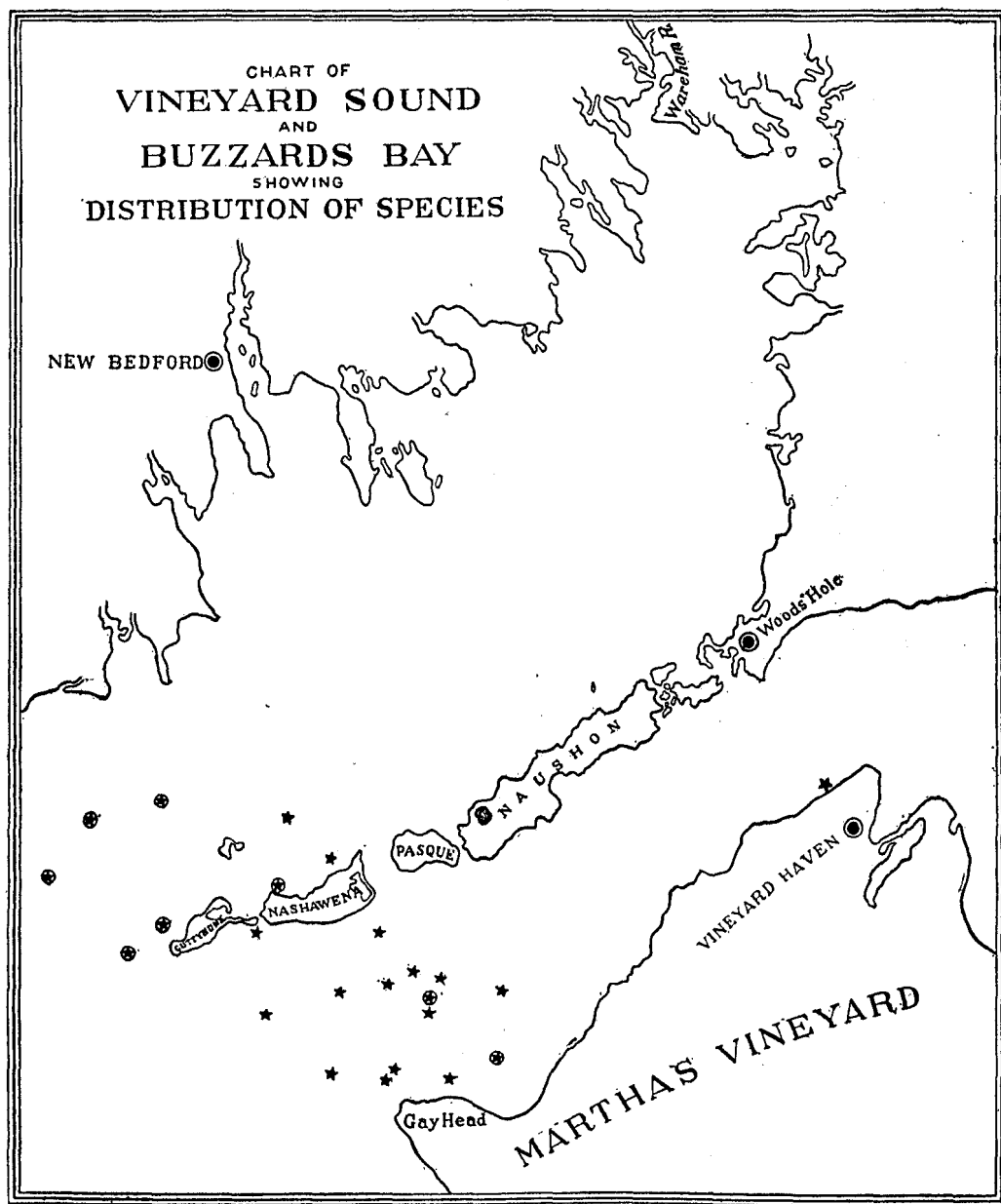


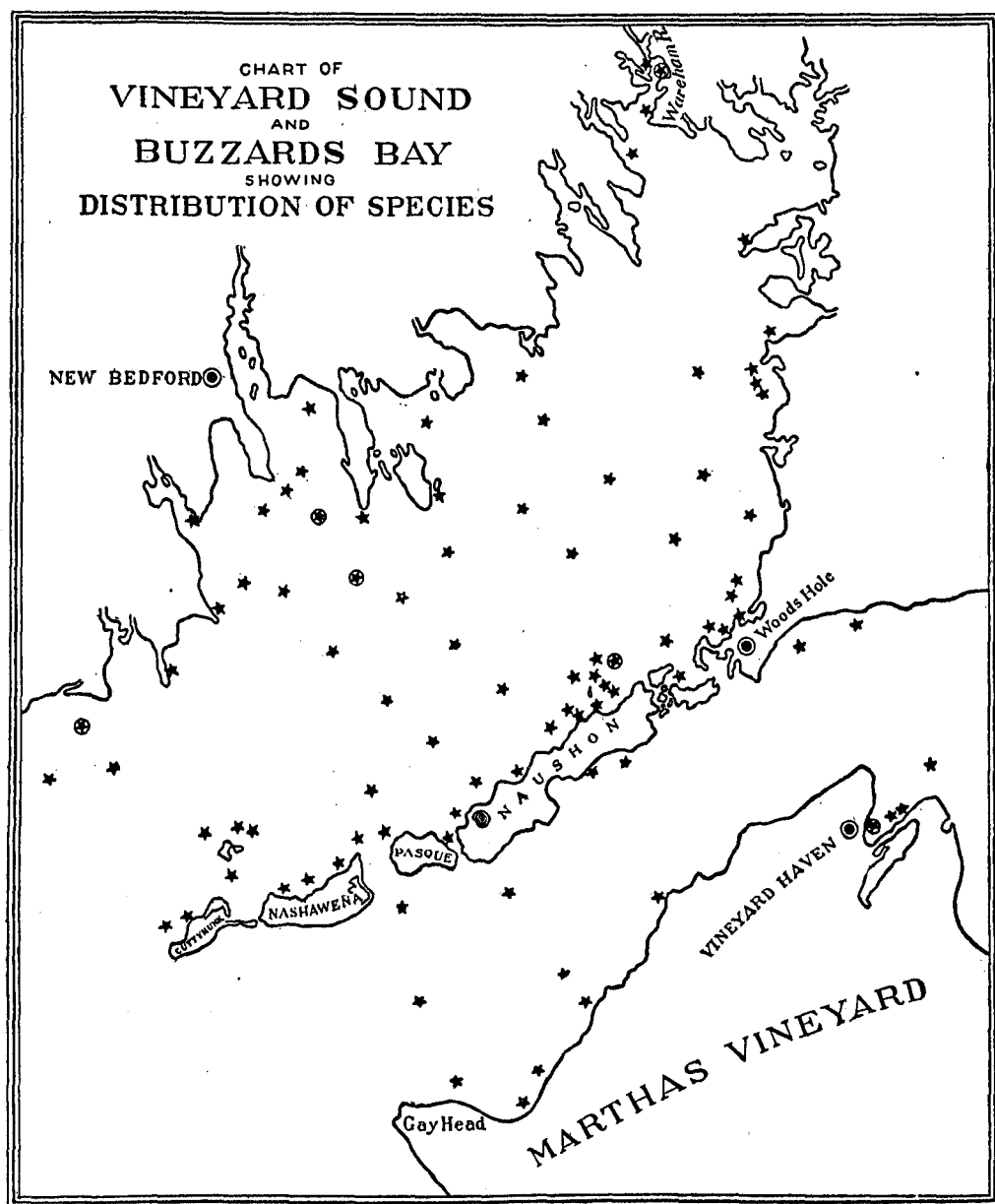
CHART 141.—*Divaricella quadrisulcata*. (See explanation of chart 26.)

CHART 142.—*Cardium pinnulatum*. (See explanation of chart 26.)

CHART 143.—*Lævicardium mortoni*. (See explanation of chart 26.)

CHART 144.—*Cyclas islandica*. (See explanation of chart 26.)



CHART 145.—*Venus mercenaria*. (See explanation of chart 26.)

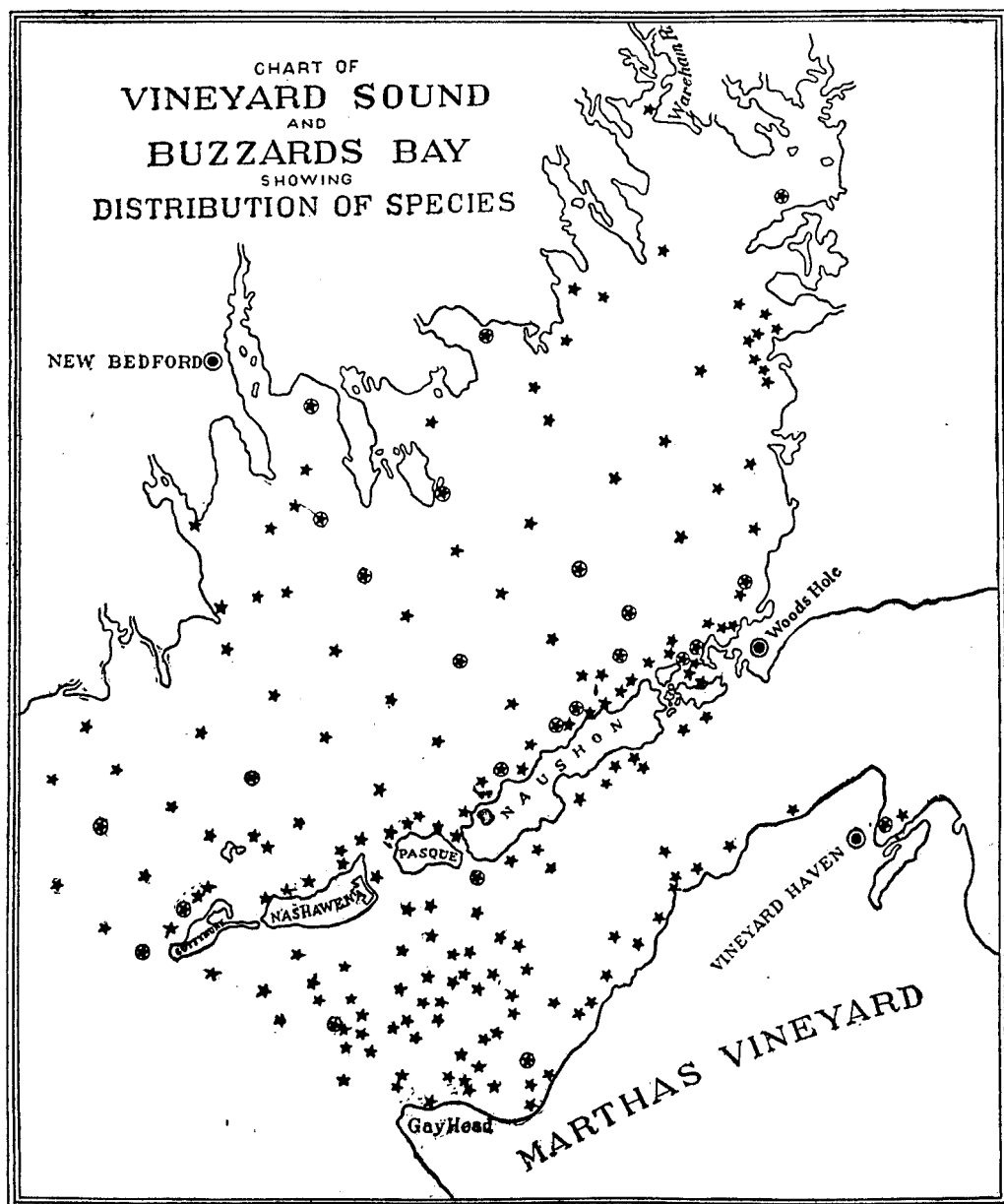
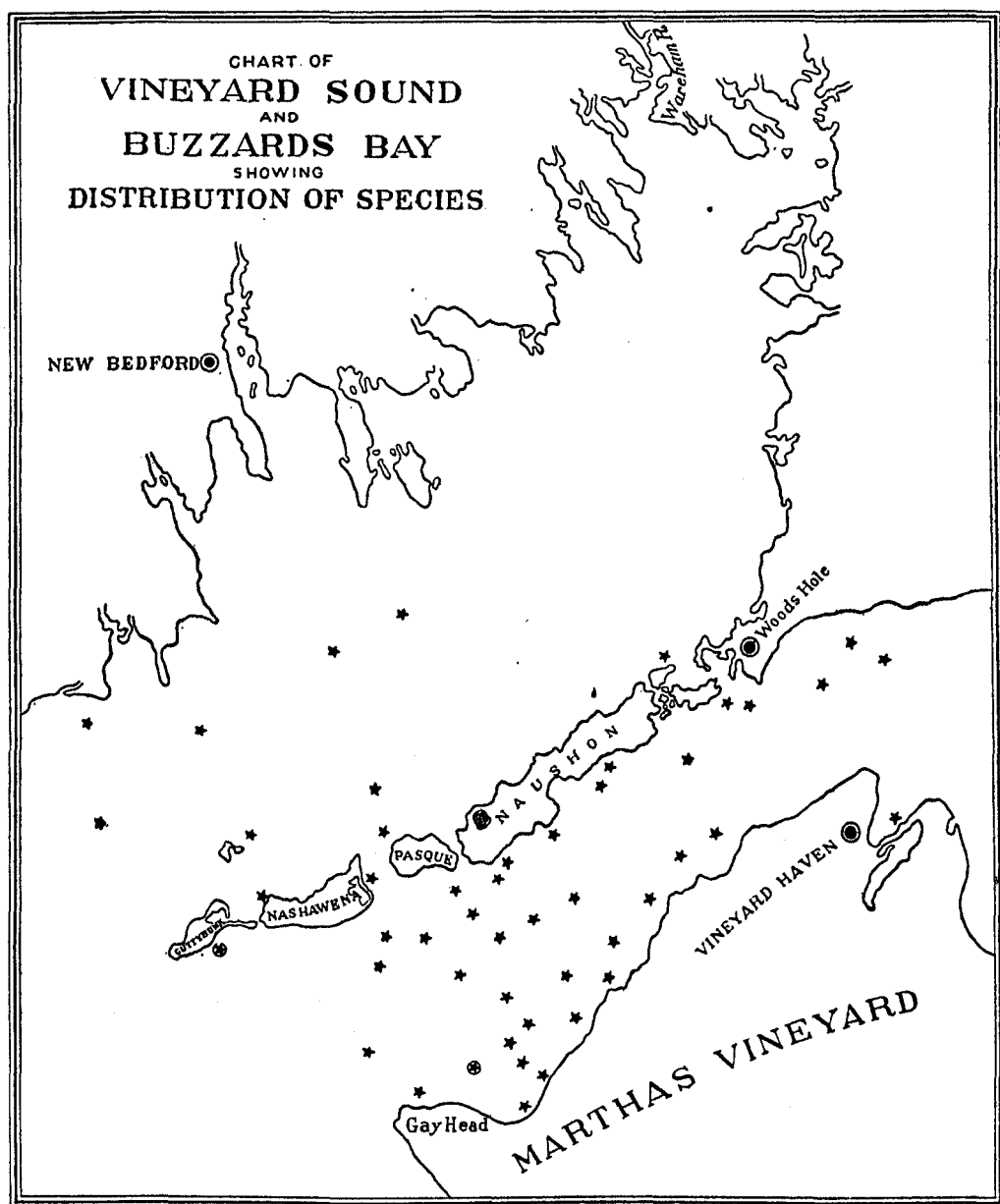
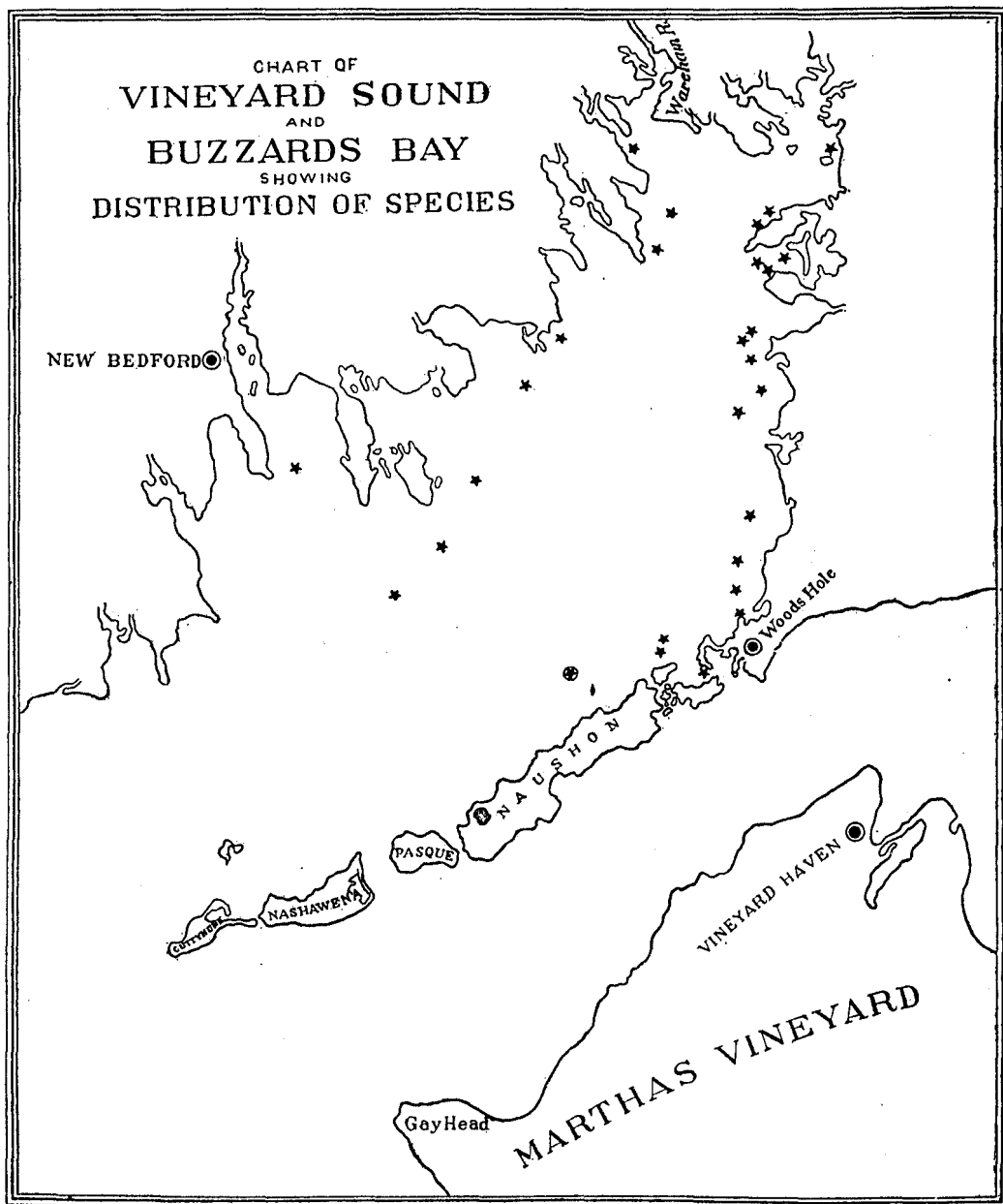


CHART 146.—*Callocardia morrhuana*. (See explanation of chart 26.)

CHART 147.—*Petricola pholadiformis*. (See explanation of chart 26.)

CHART 148.—*Tagelus gibbus*. (See explanation of chart 26.)

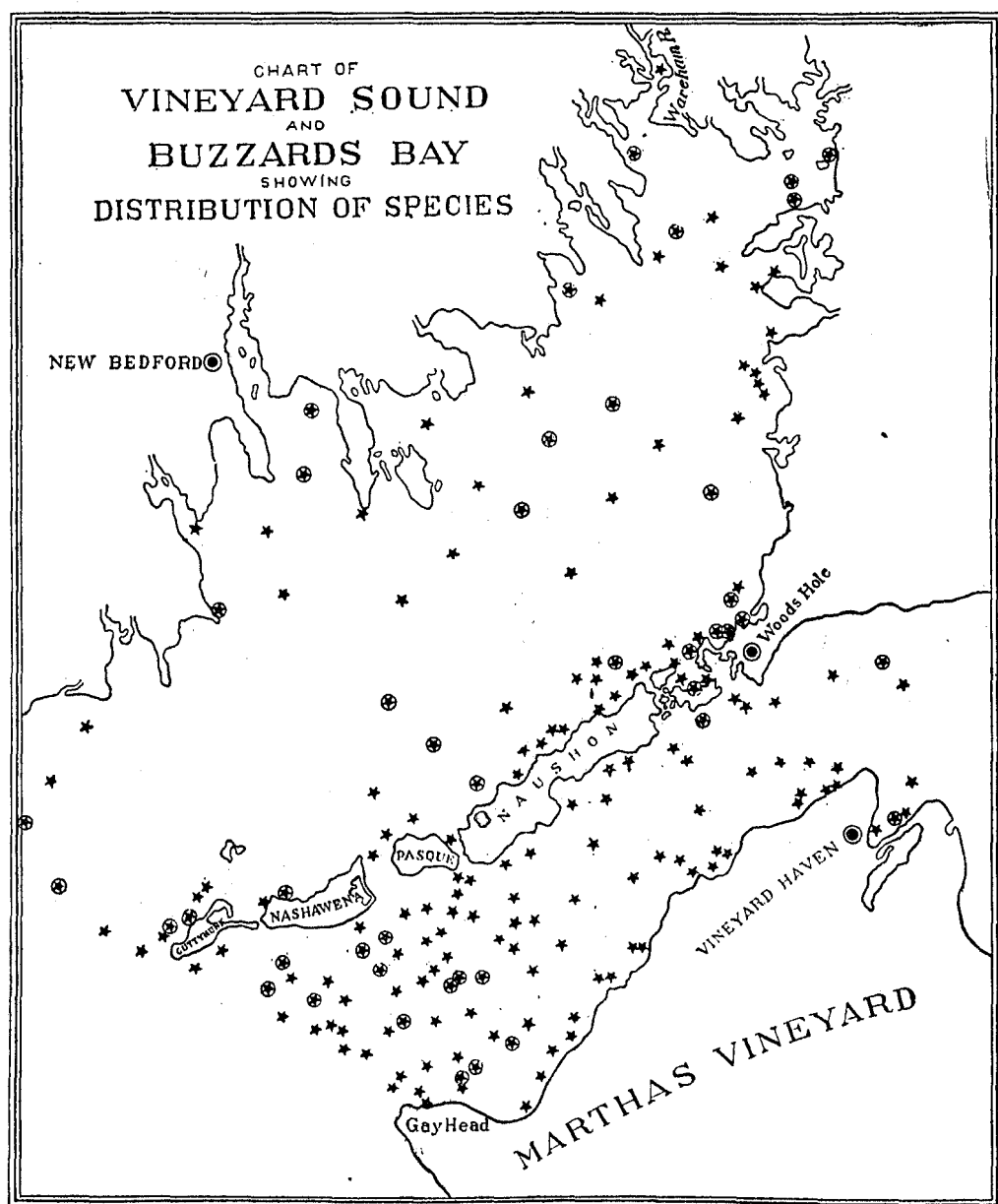
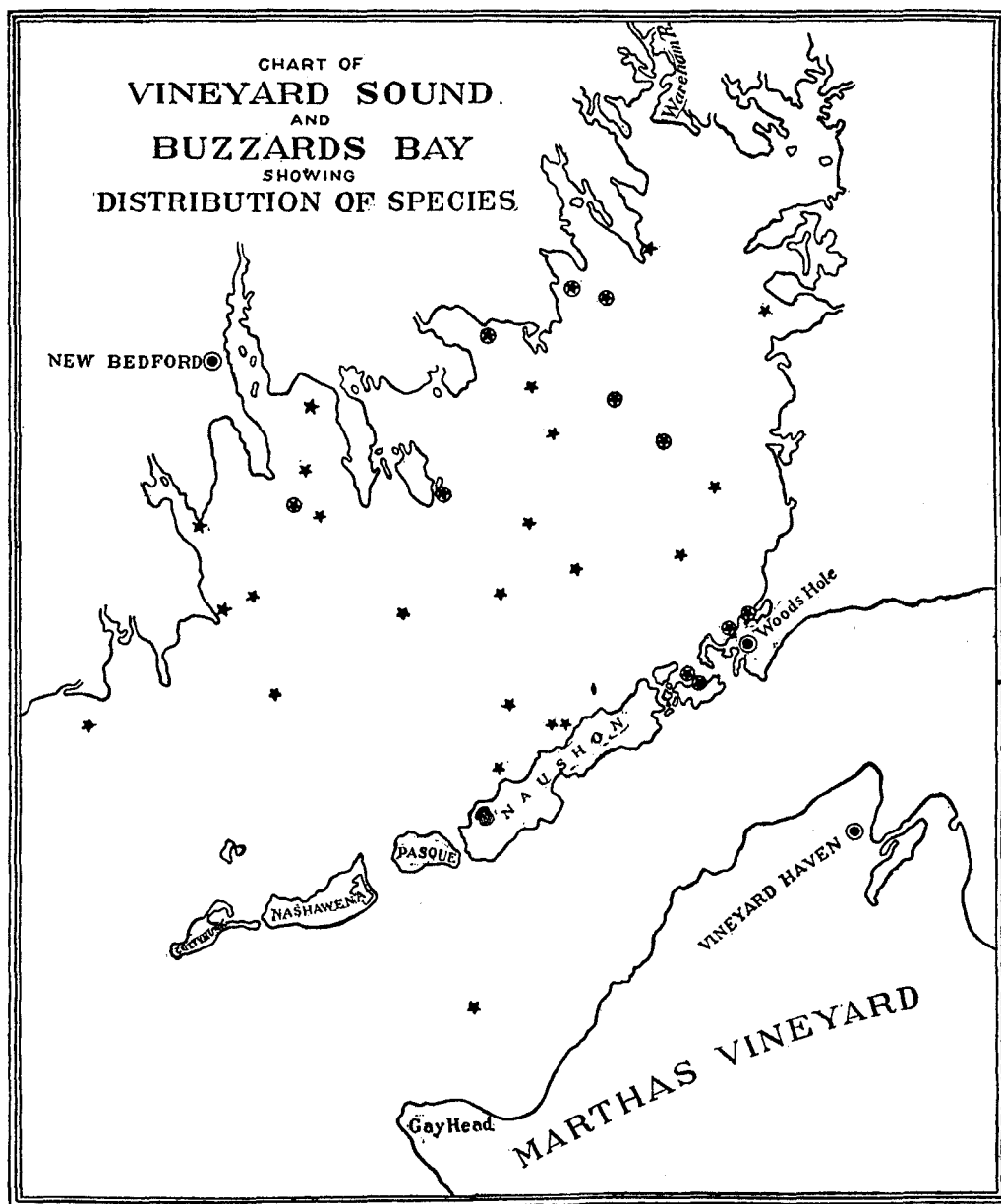
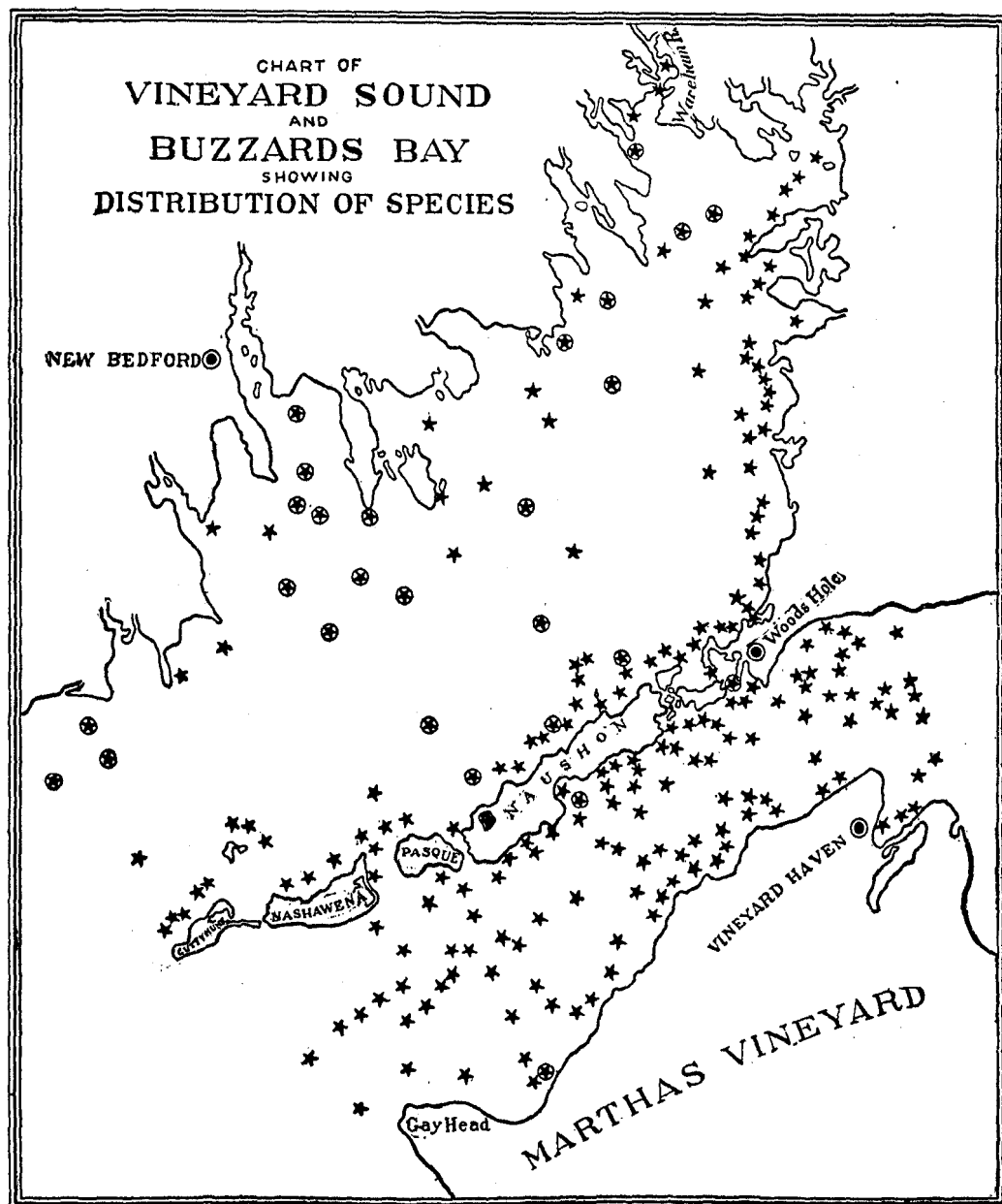
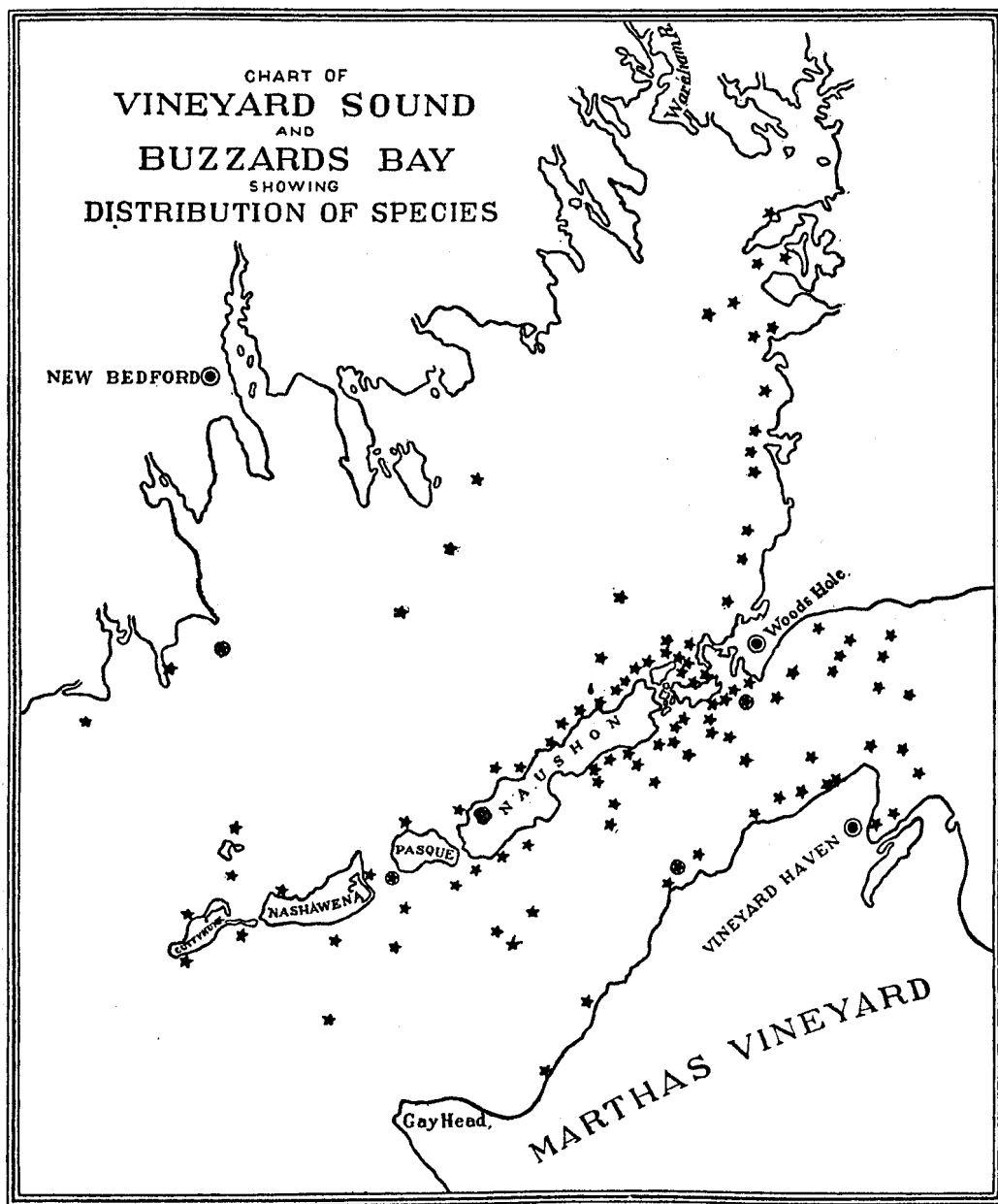


CHART 149.—*Tellina tenera*. (See explanation of chart 26.)

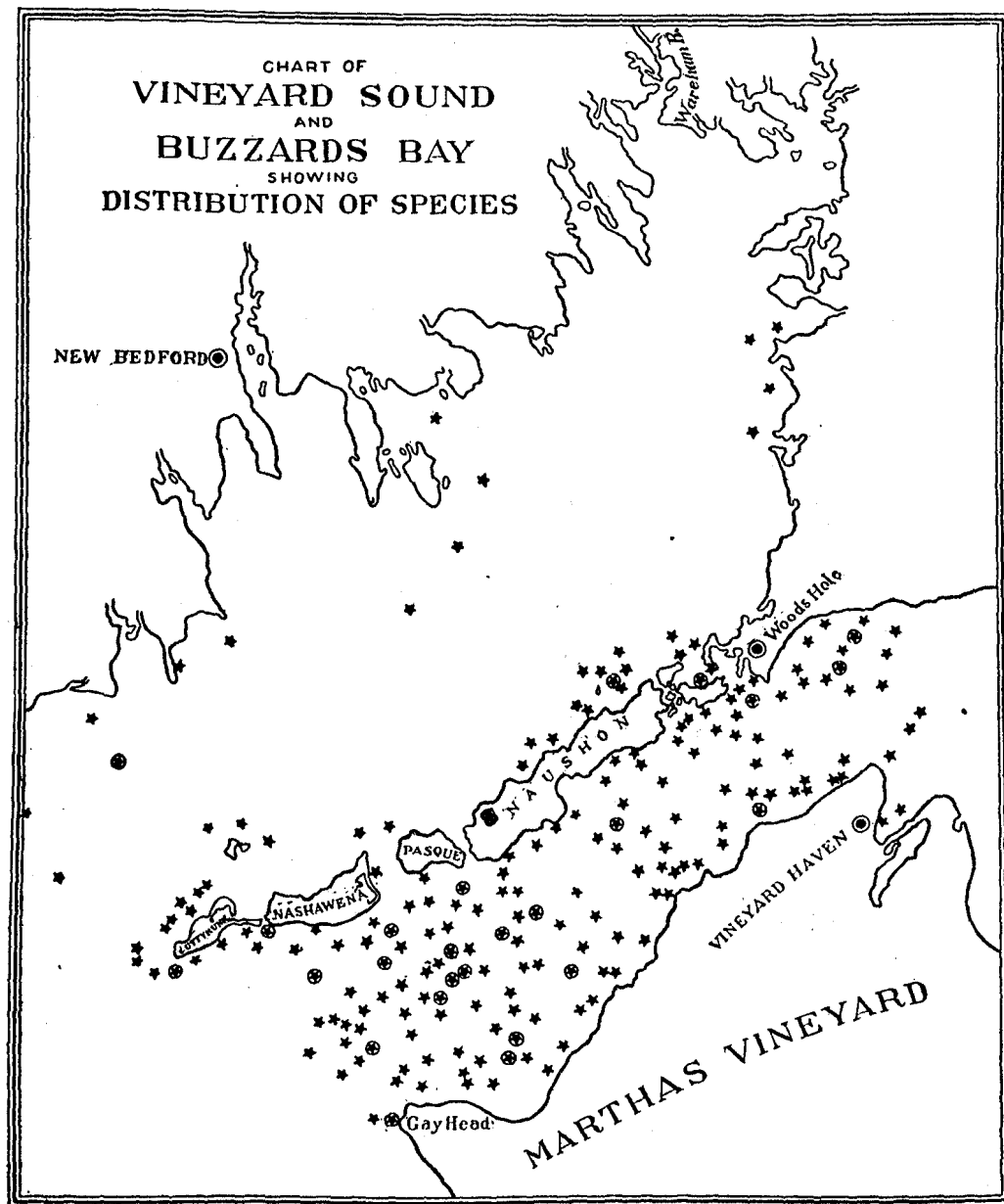
CHART 150.—*Macoma tenta*. (See explanation of chart 26.)

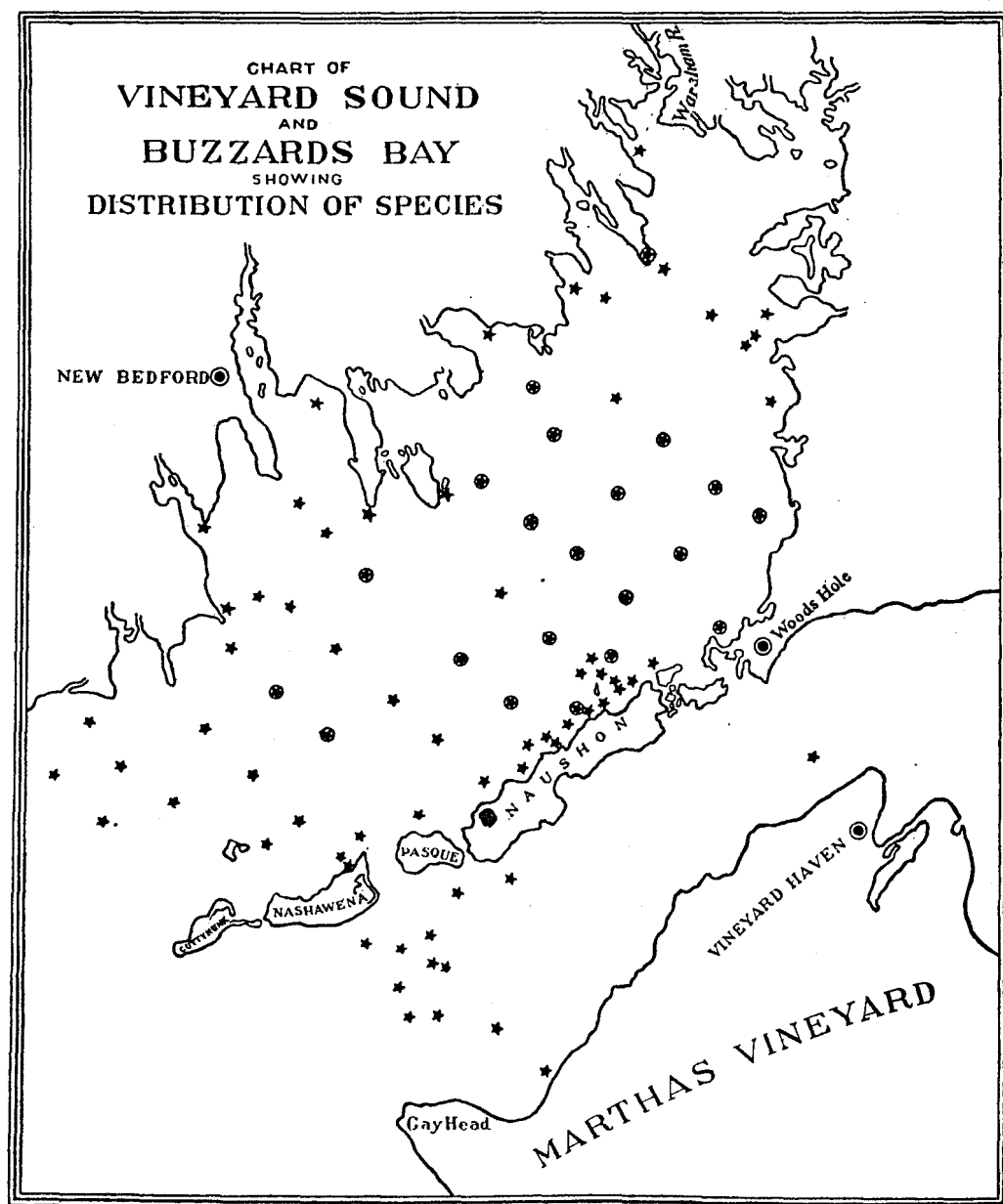
CHART 151.—*Ensis directus*. (See explanation of chart 26.)

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CHART 152.—*Cumingia tellinoides*. (See explanation of chart 26.)



CHART 153.—*Spisula solidissima*. (See explanation of chart 26.)

CHART 154.—*Mulinia lateralis*. (See explanation of chart 26.)

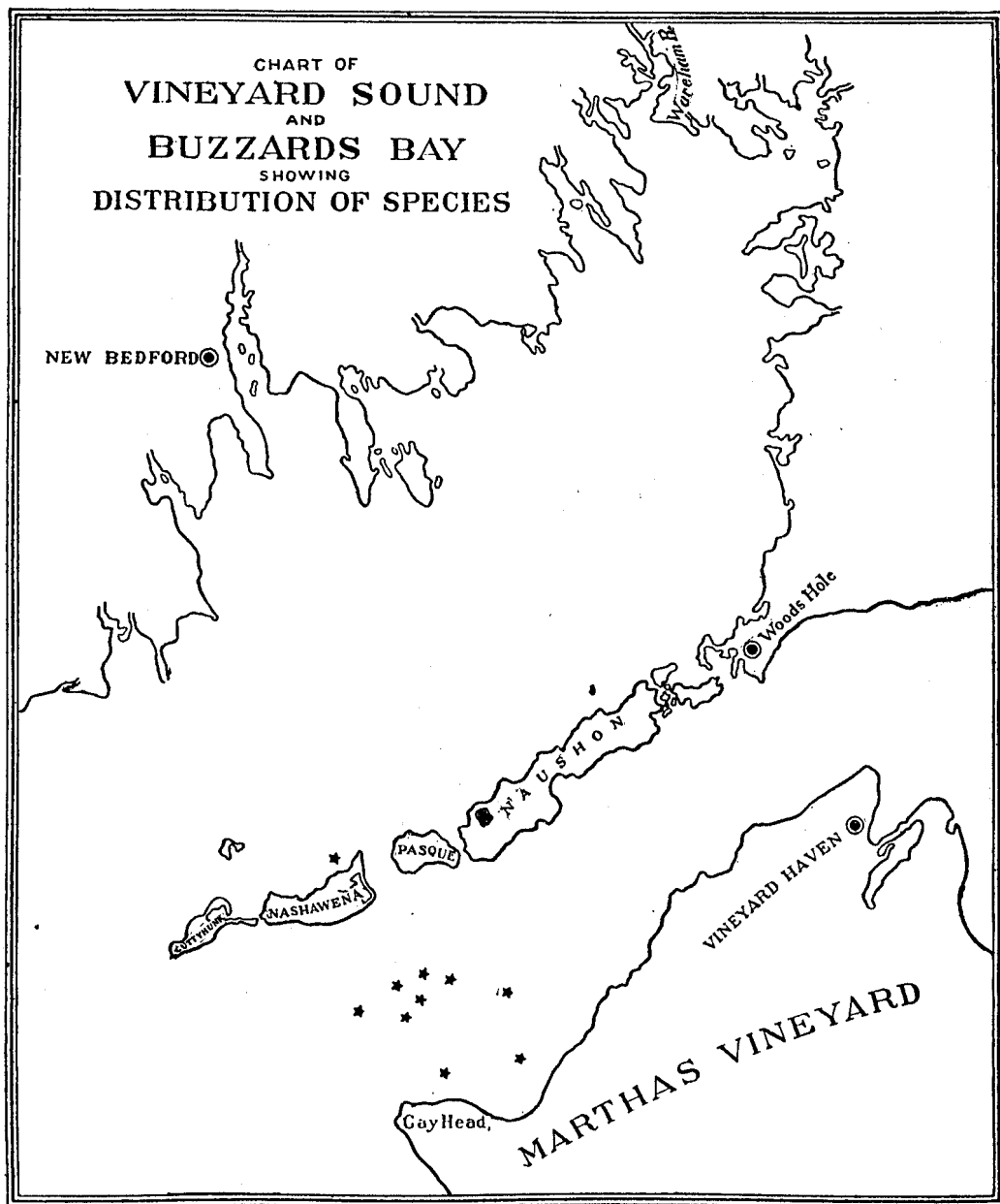
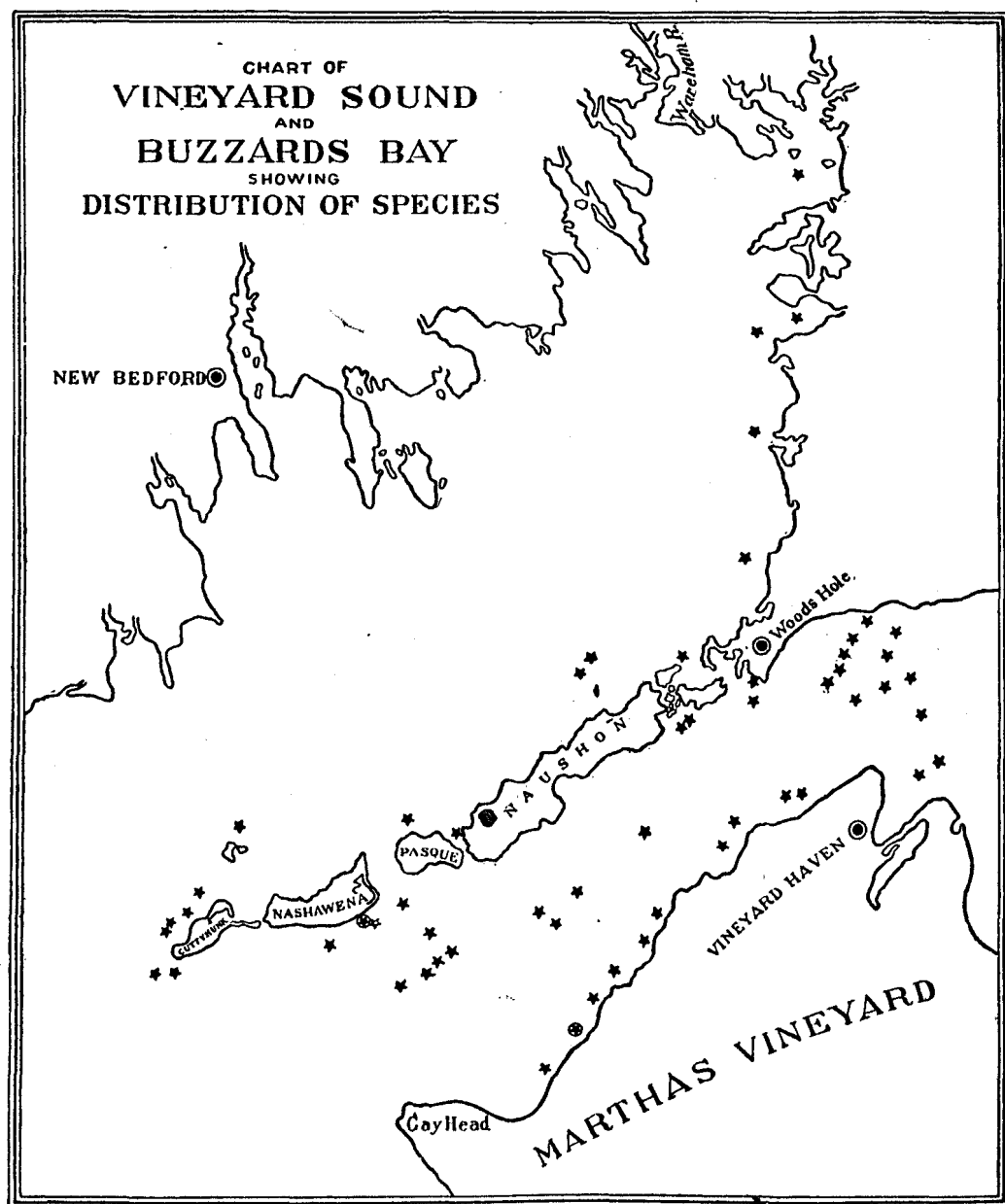
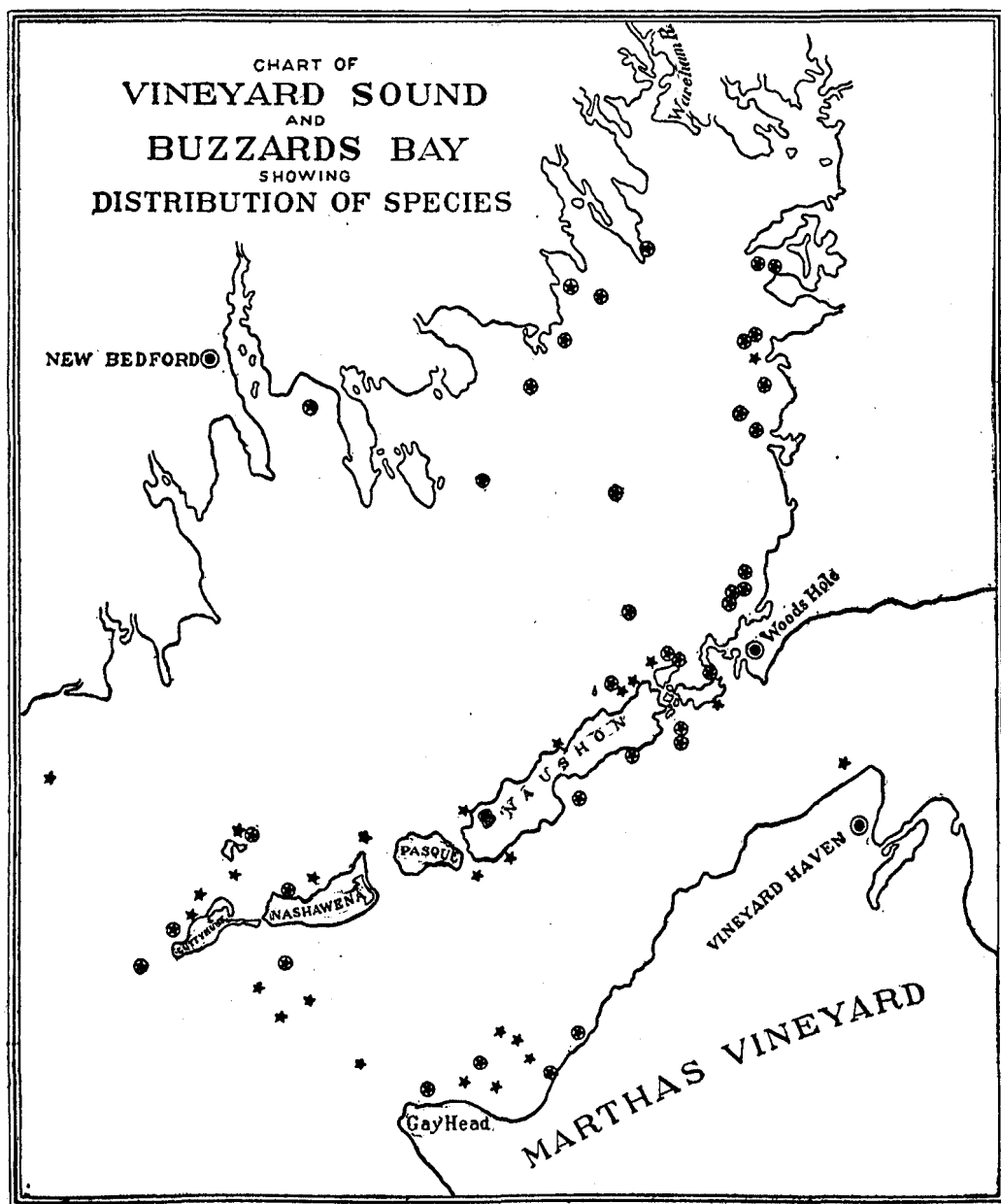


CHART 155.—*Thracia conradi*. (See explanation of chart 26.)

CHART 156.—*Cochloidesma leanum*. (See explanation of chart 26.)

CHART 157.—*Lyonsia hyalina*. (See explanation of chart 26.)

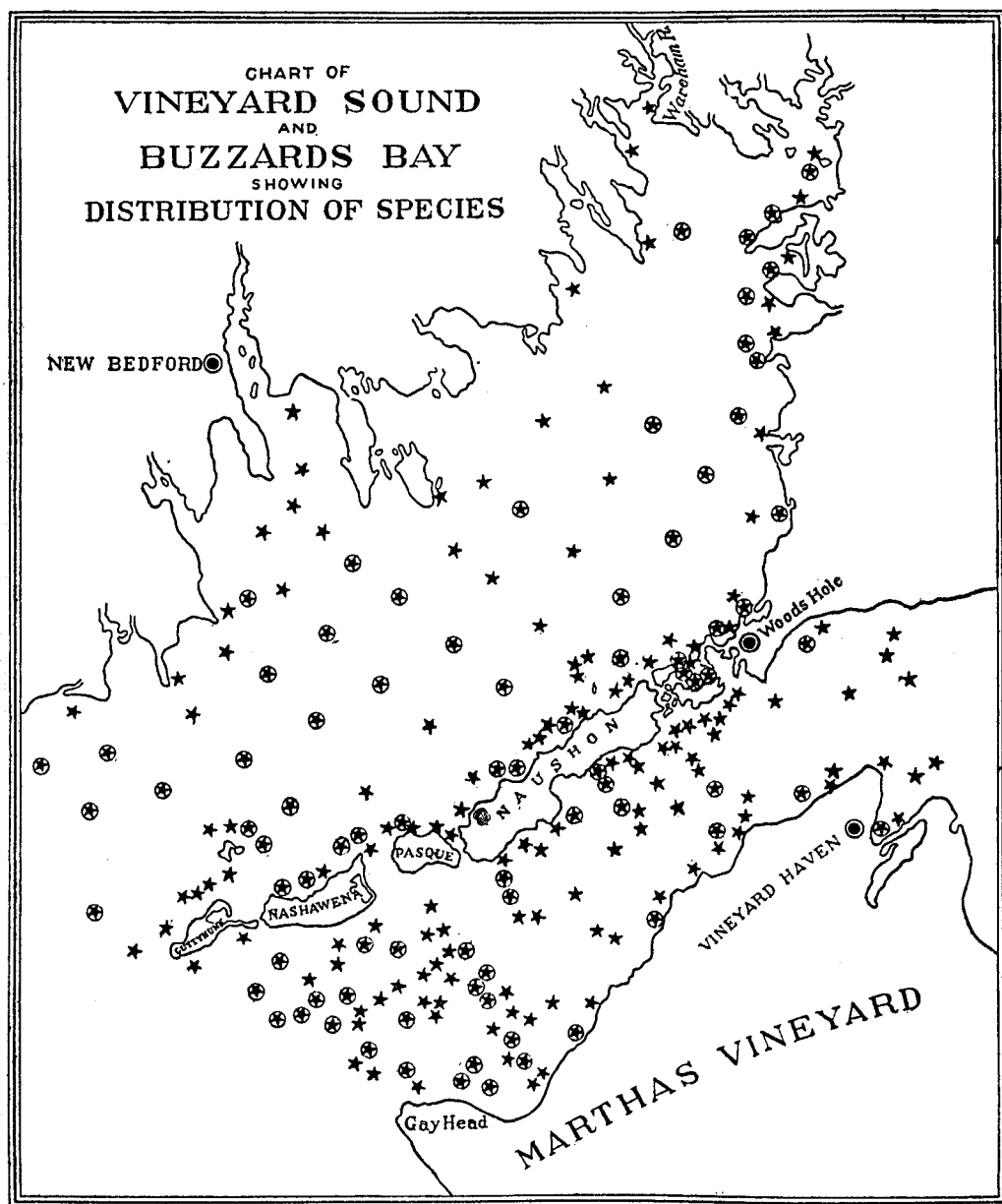
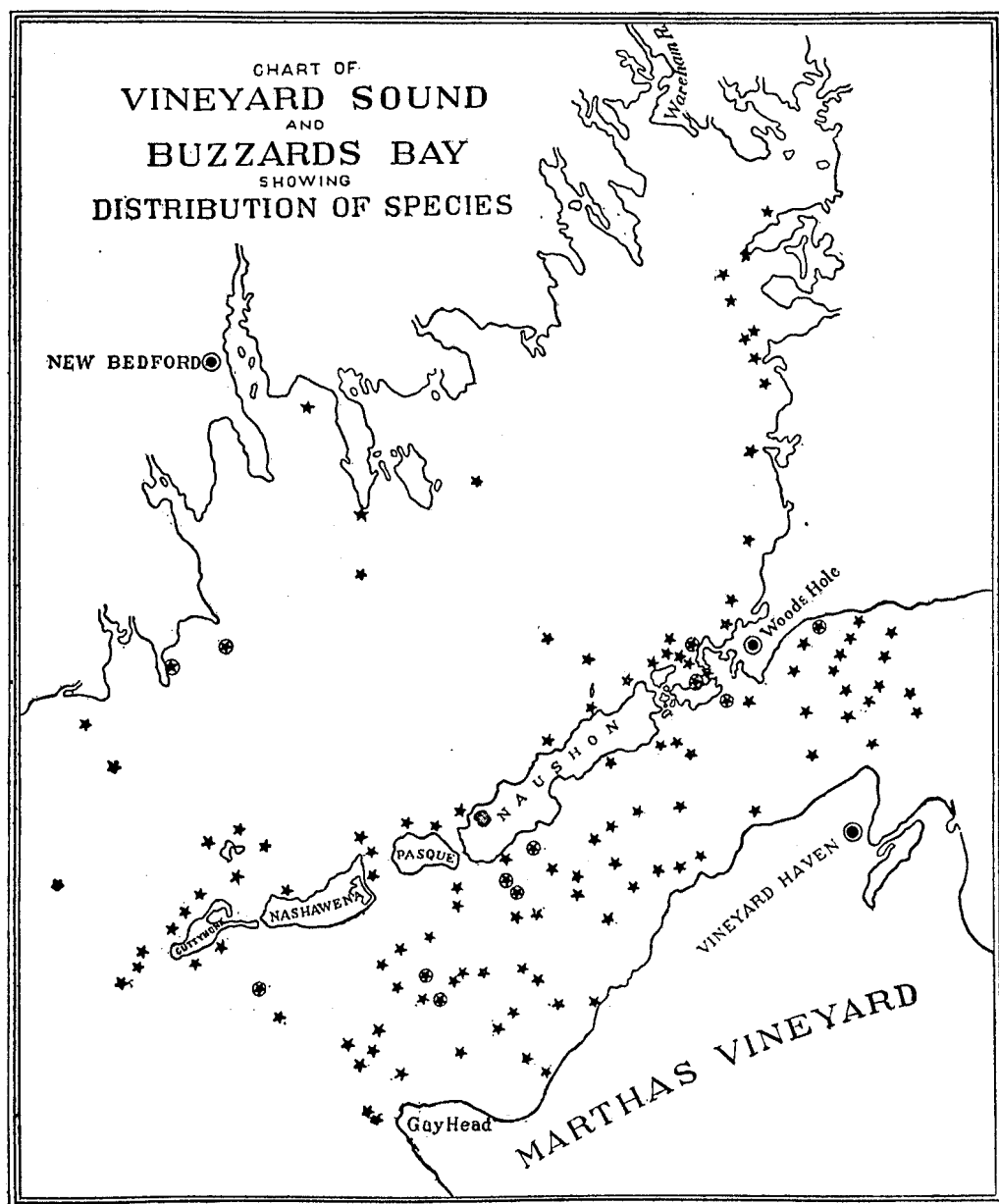
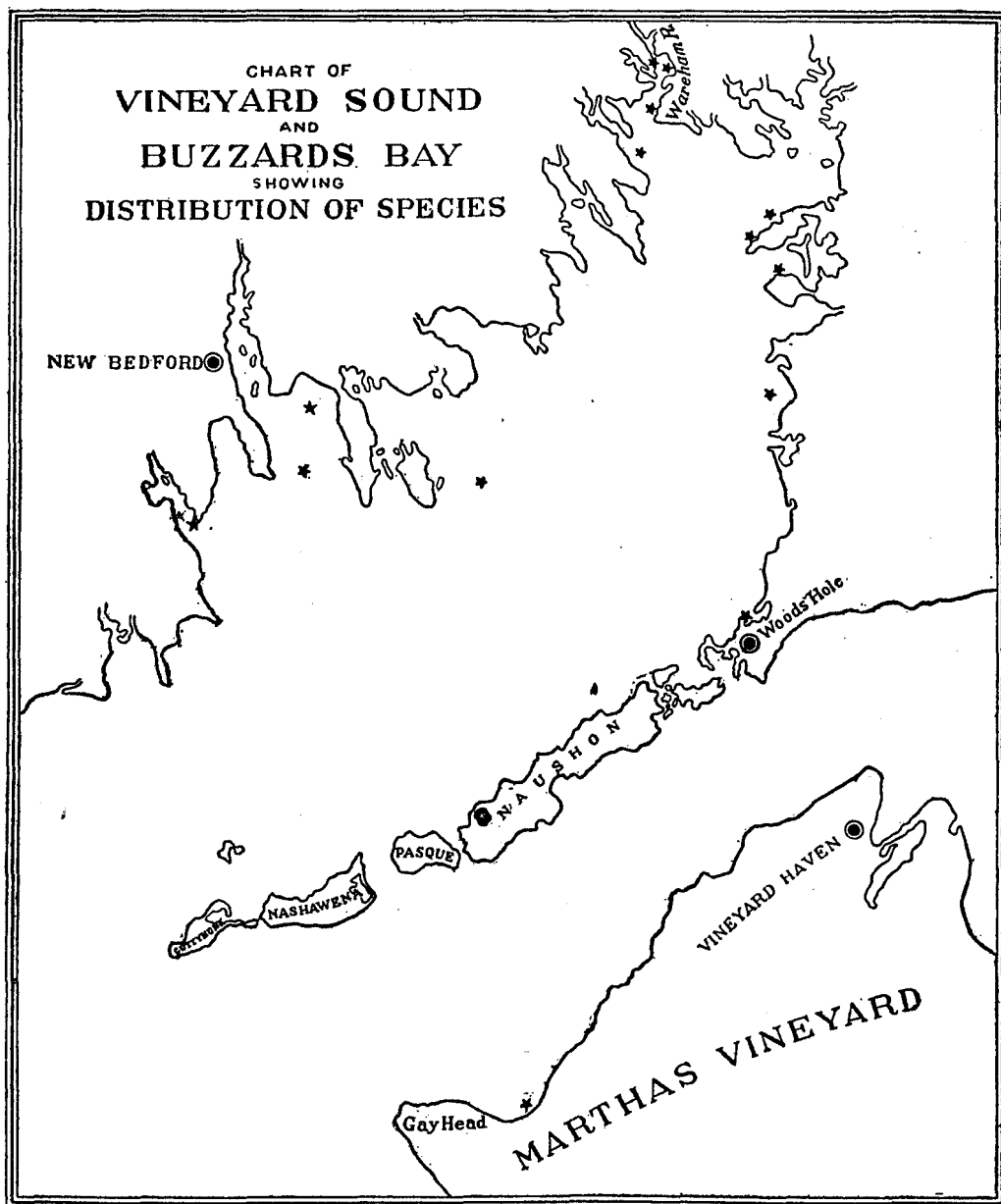
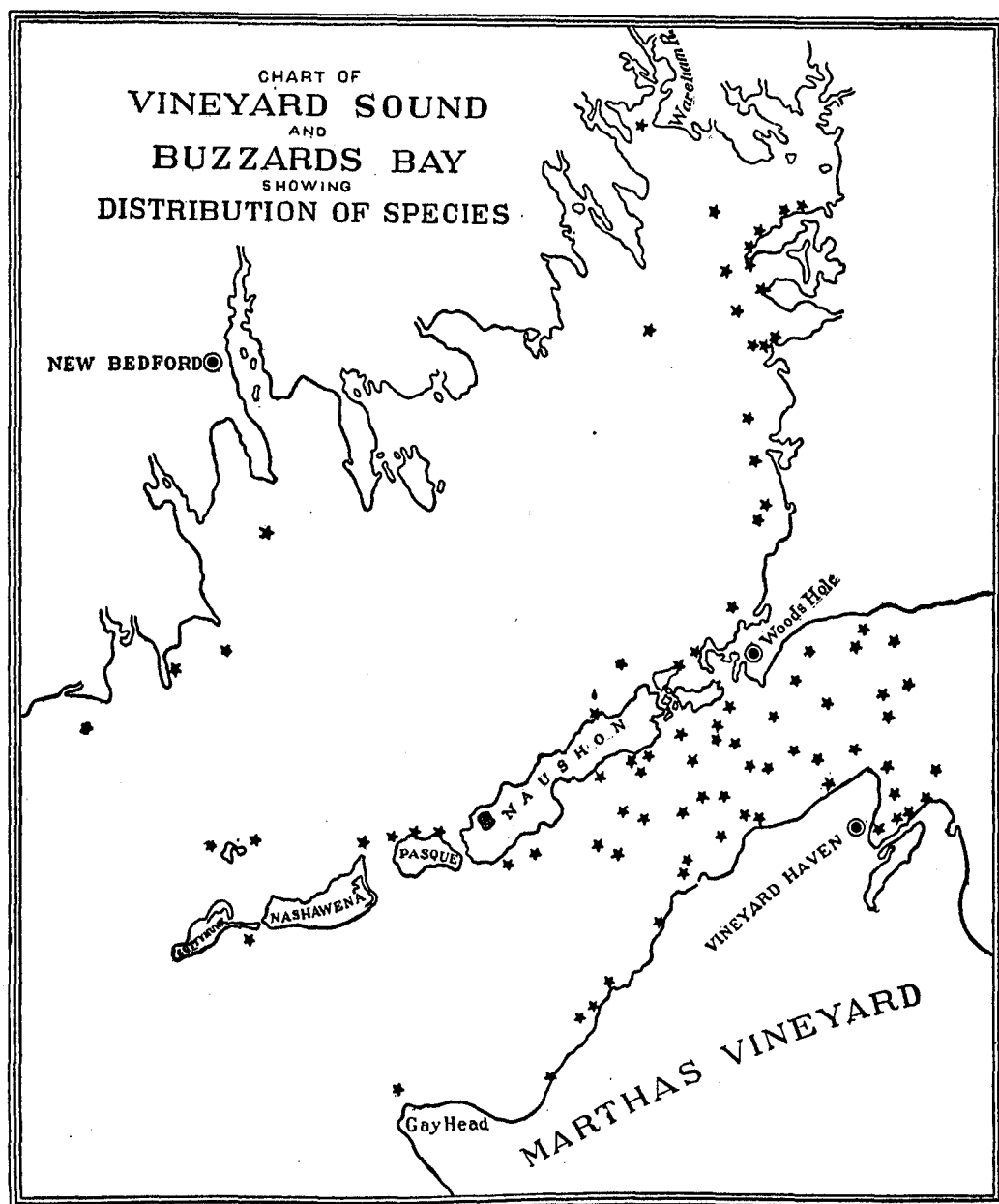


CHART 158.—*Clidiophora gouldiana*. (See explanation of chart 26.)

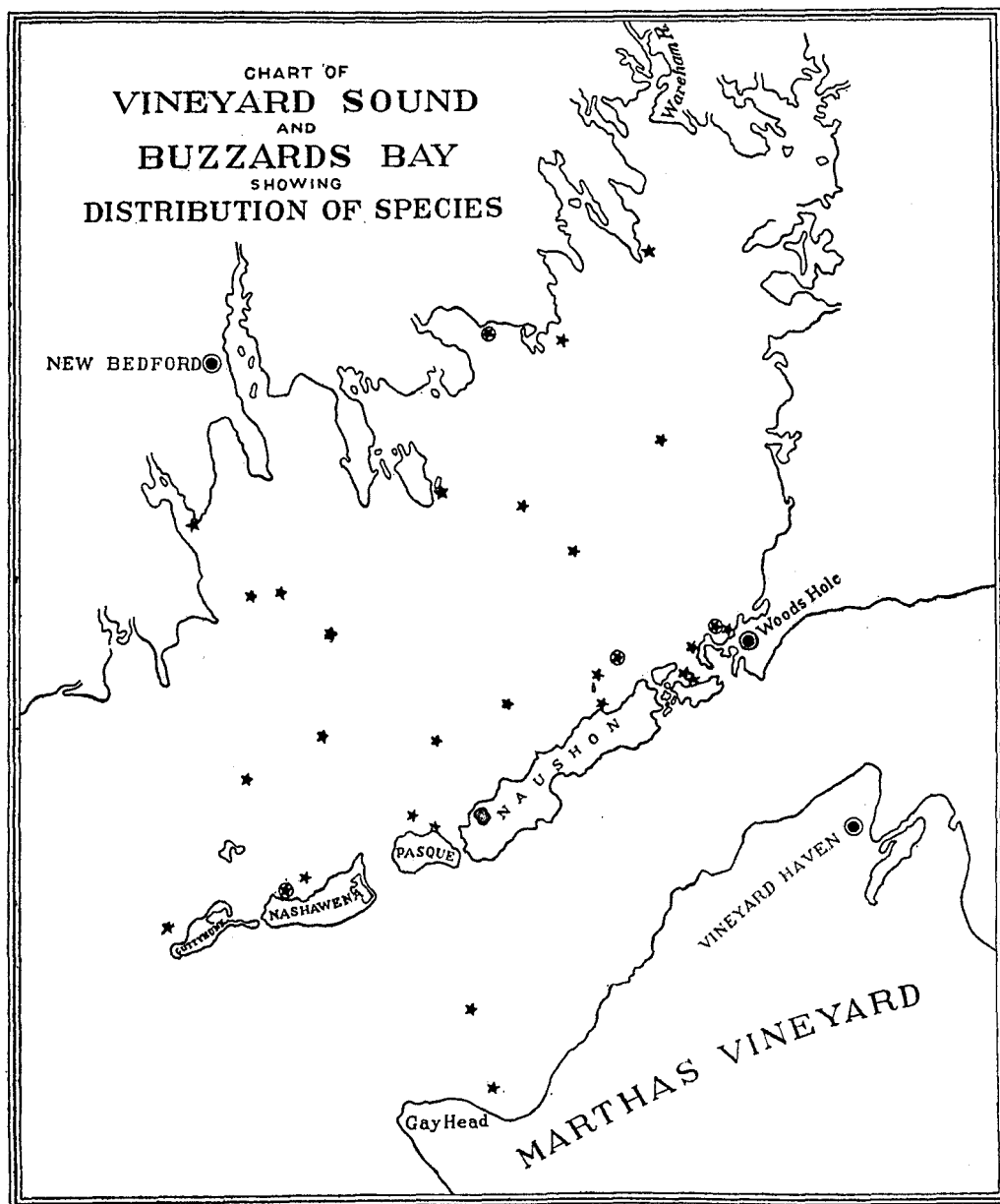
CHART 159.—*Corbula contracta*. (See explanation of chart 26.)

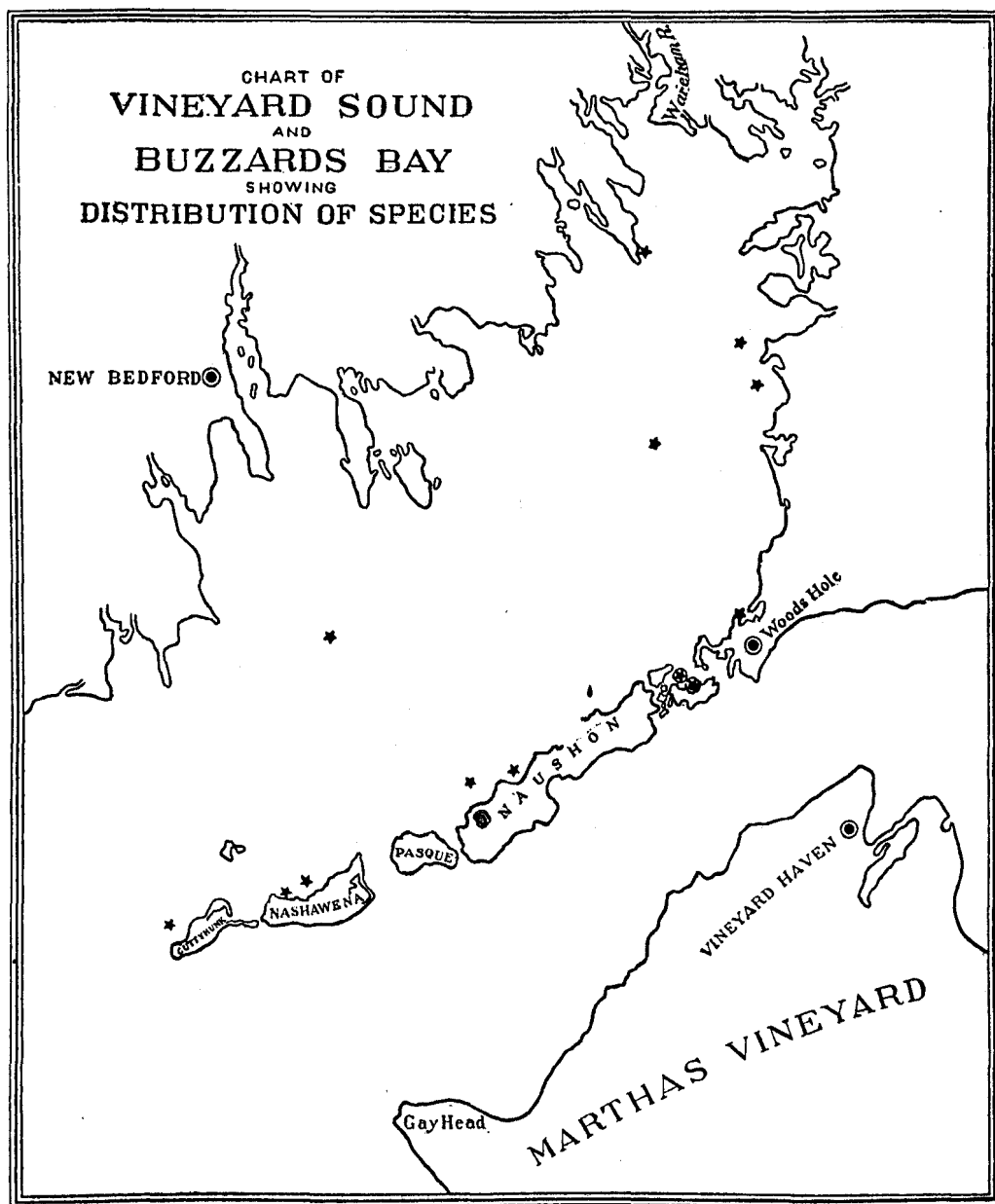
CHART 160.—*Mya arenaria*. (See explanation of chart 26.)

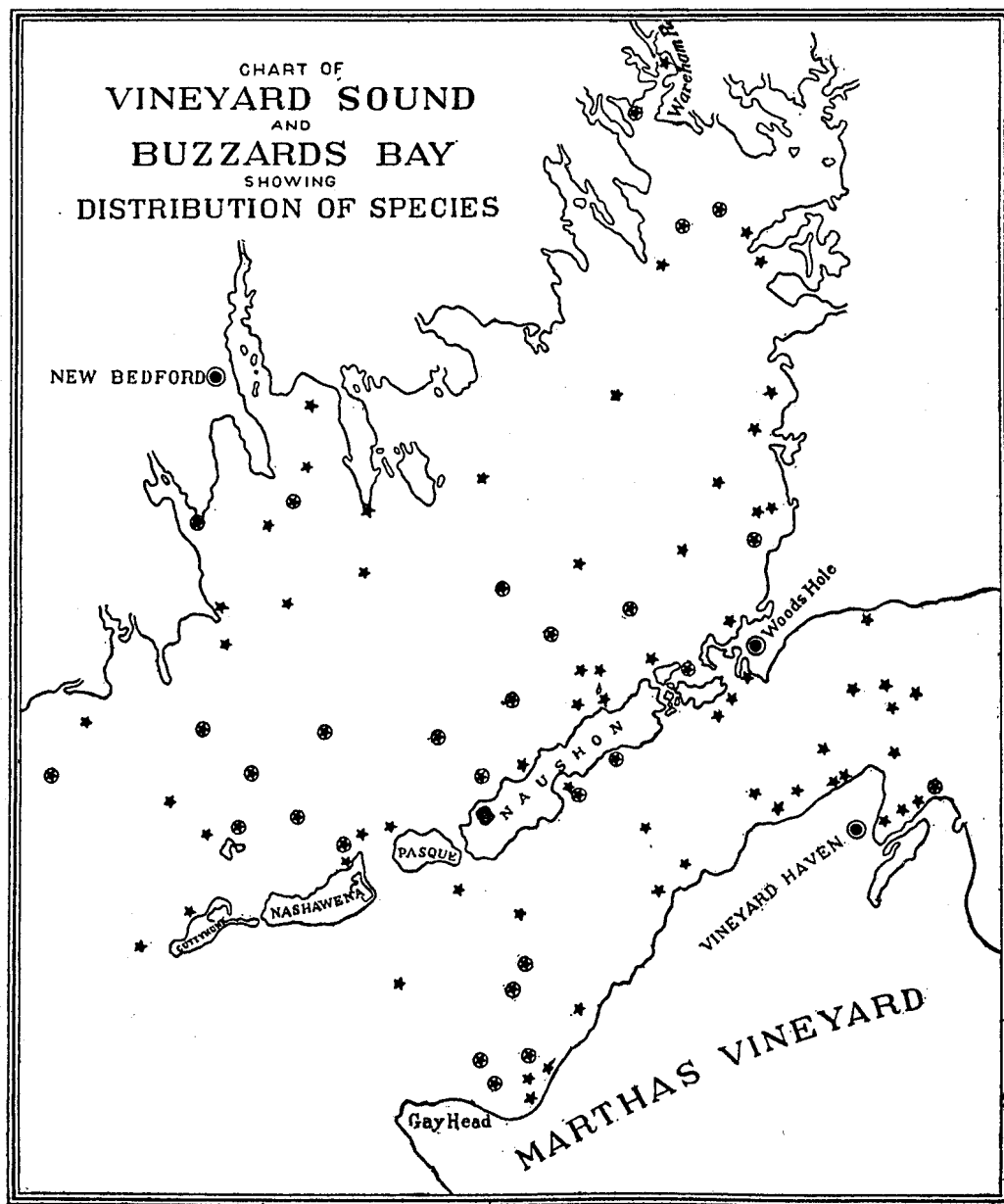


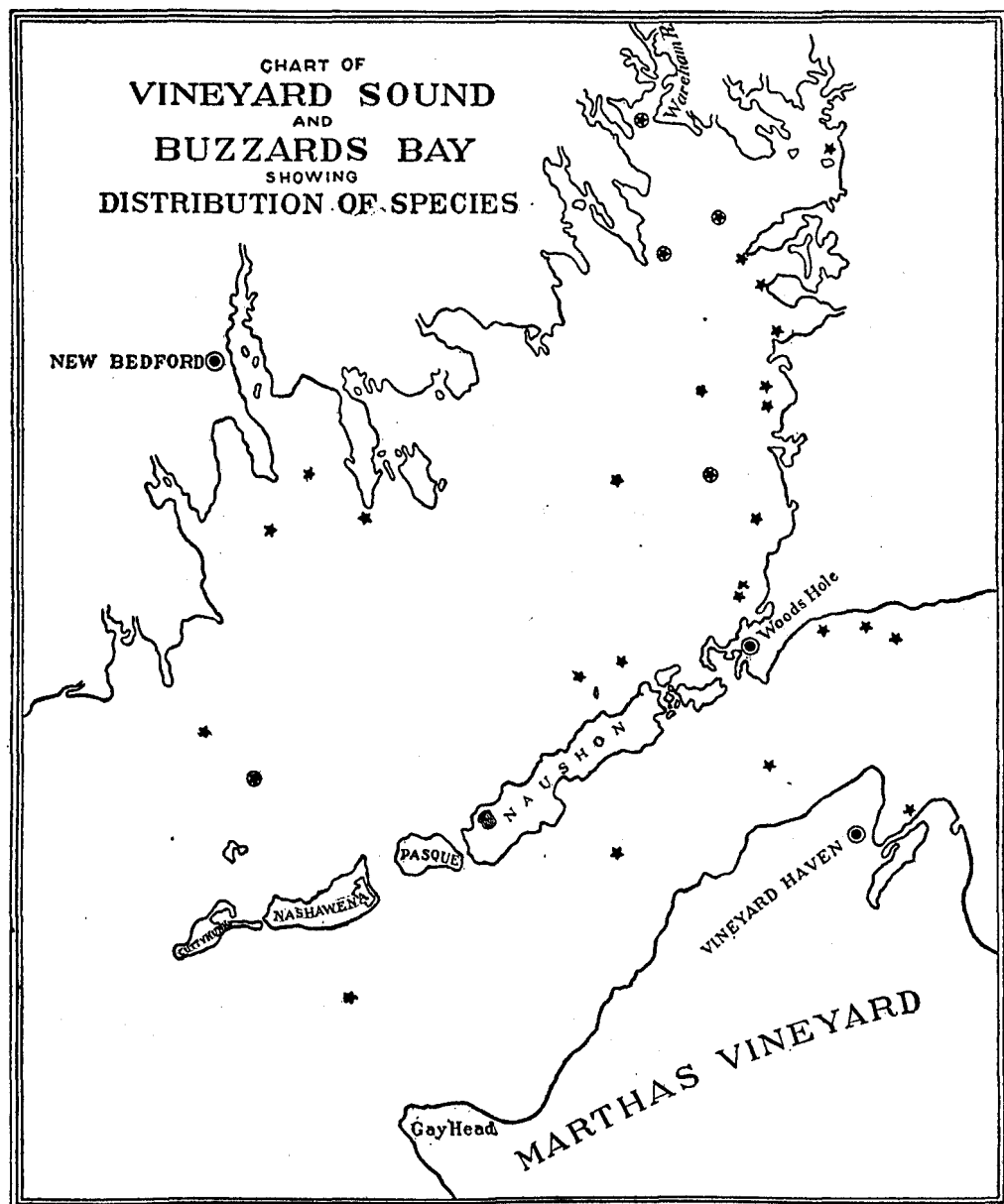
CHART 161.—*Chaetopleura apiculata*.

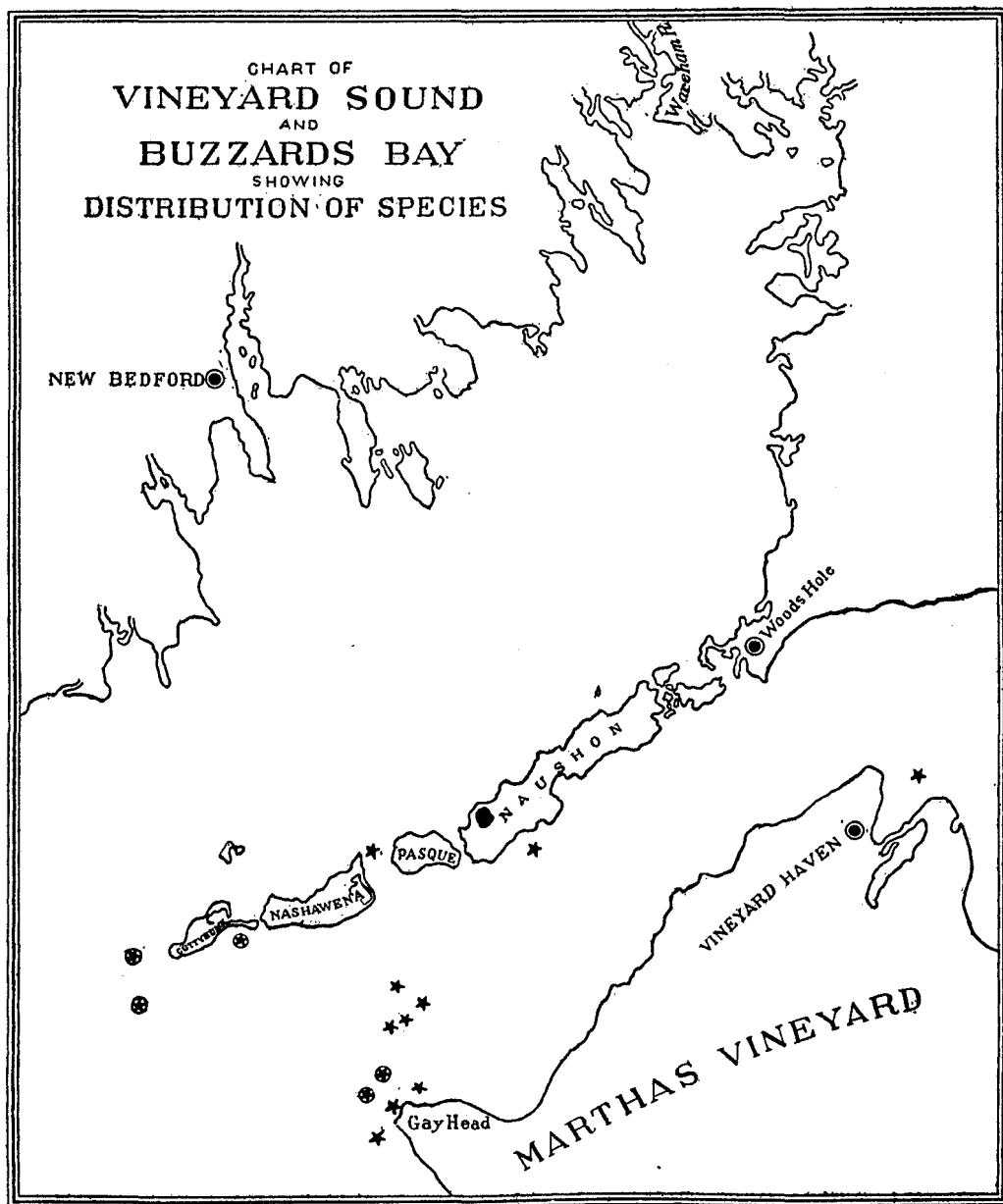
Despite the omission of the circles from this chart, nearly all of our records are for living specimens.

CHART 162.—*Tornatina canaliculata*. (See explanation of chart 26.)

CHART 163.—*Cylichnella oryza*. (See explanation of chart 26.)

CHART 164.—*Busyon canaliculatum*. (See explanation of chart 26.)

CHART 165.—*Busyon carica*. (See explanation of chart 26.)

CHART 166.—*Buccinum undatum*. (See explanation of chart 26.)

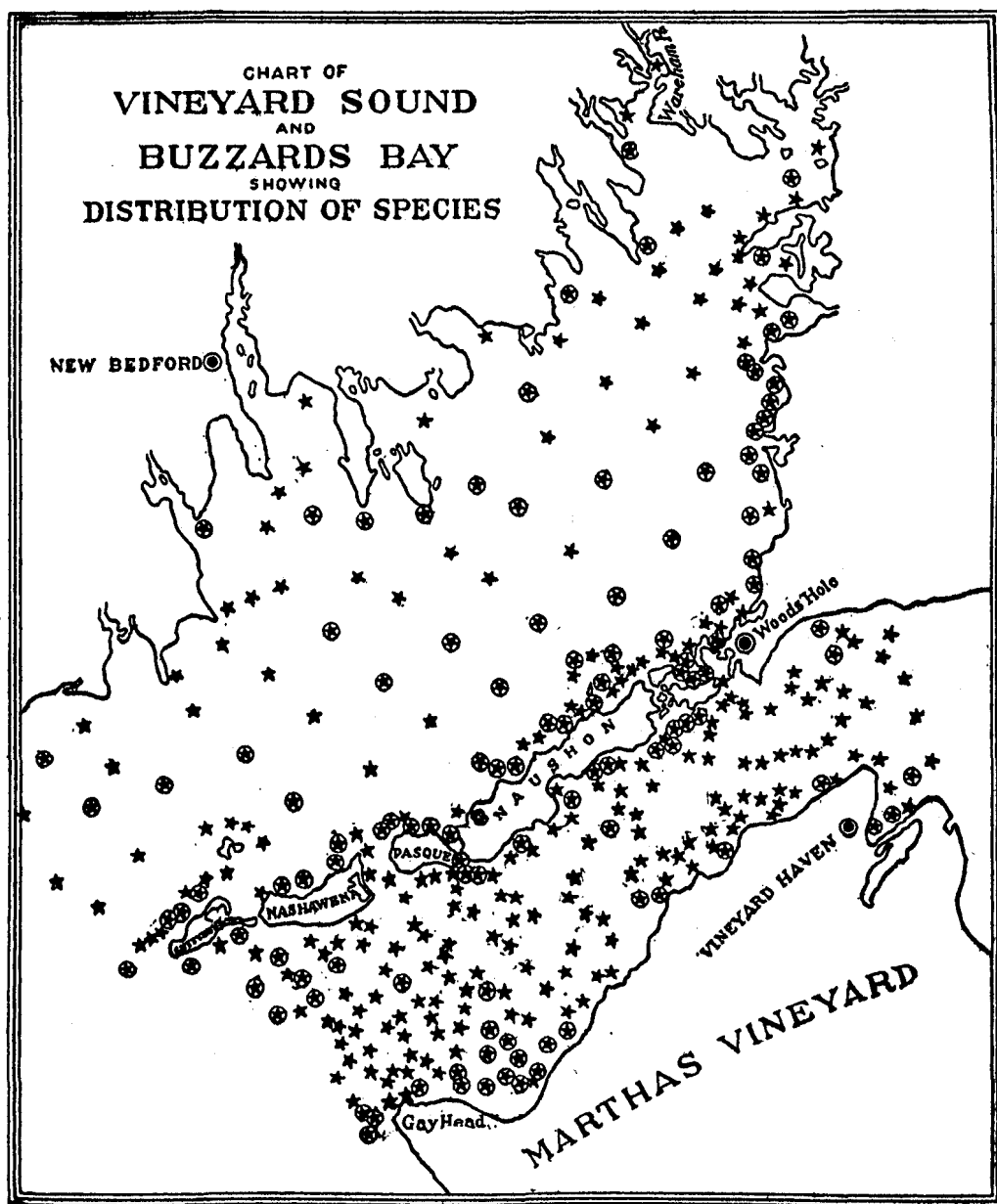


CHART 167.—*Tritia trivittata*. (See explanation of chart 26.)  
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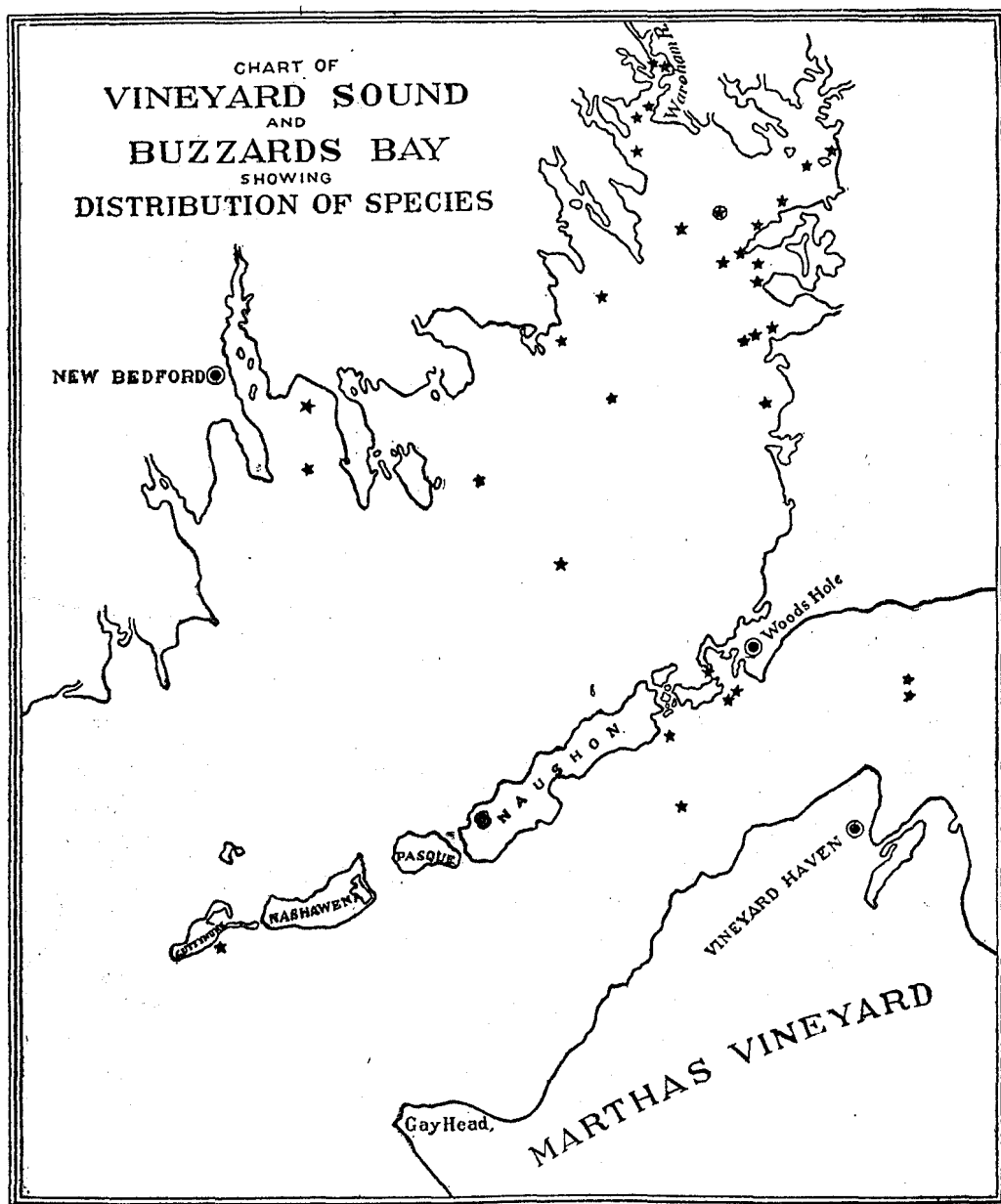
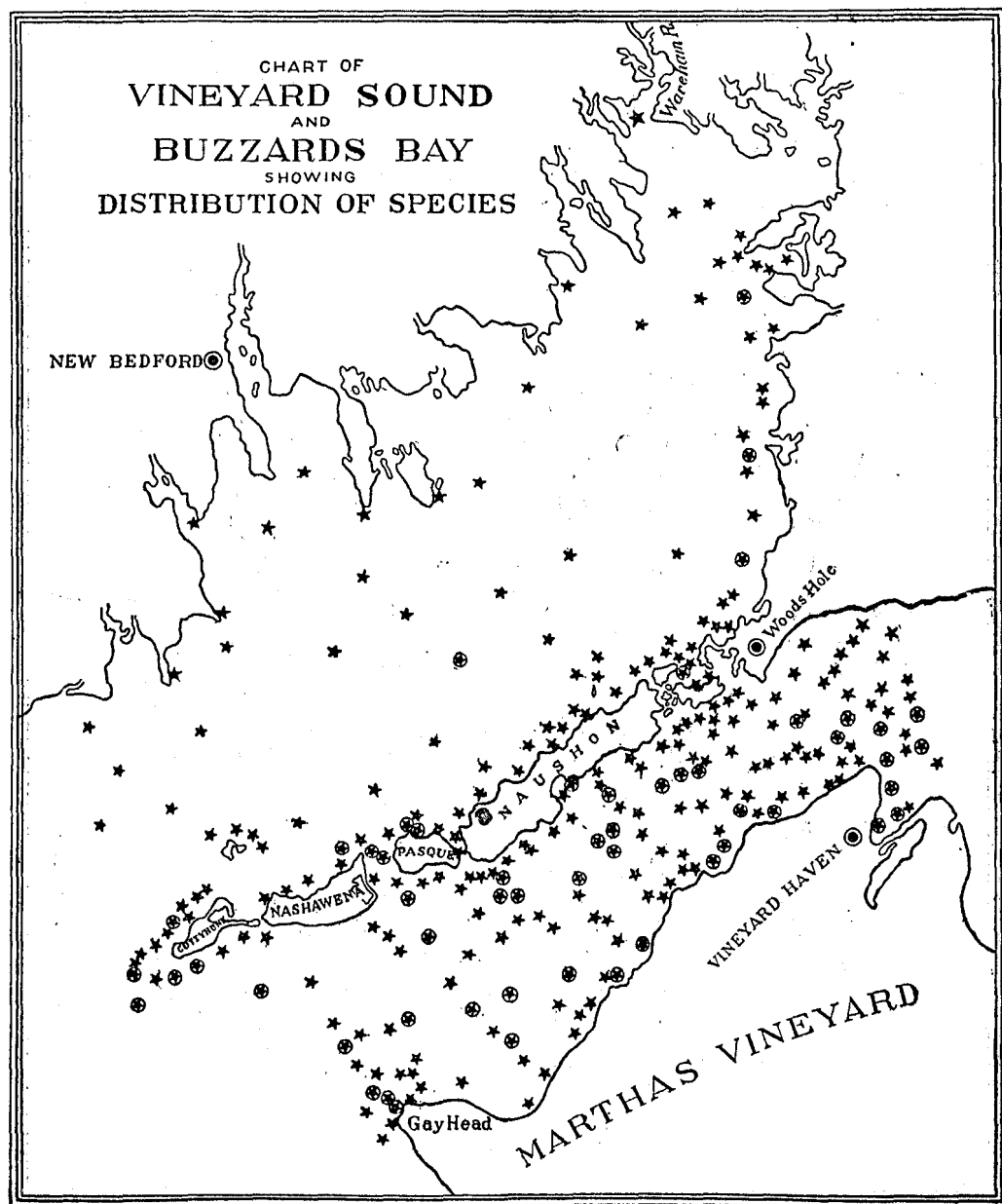
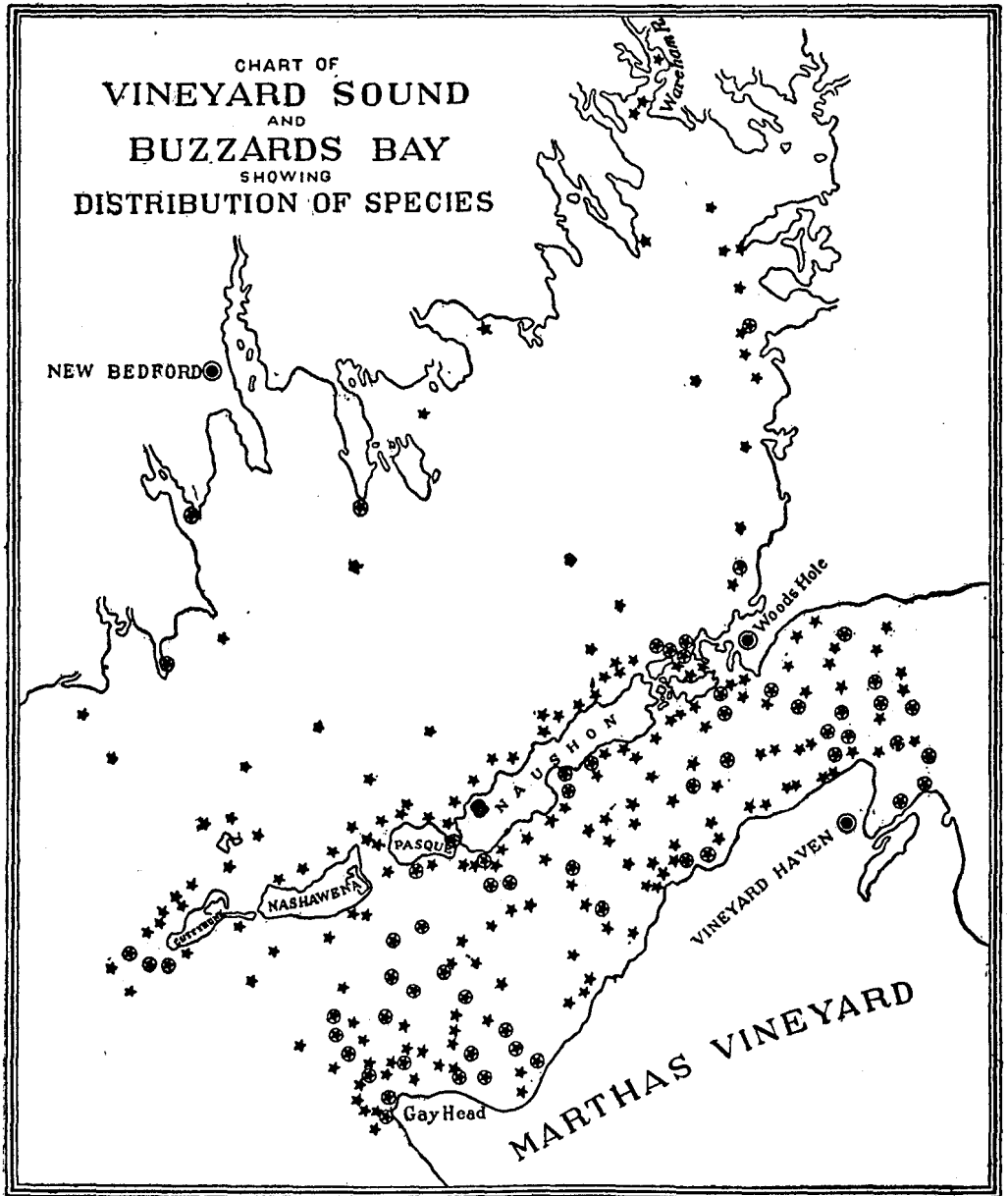


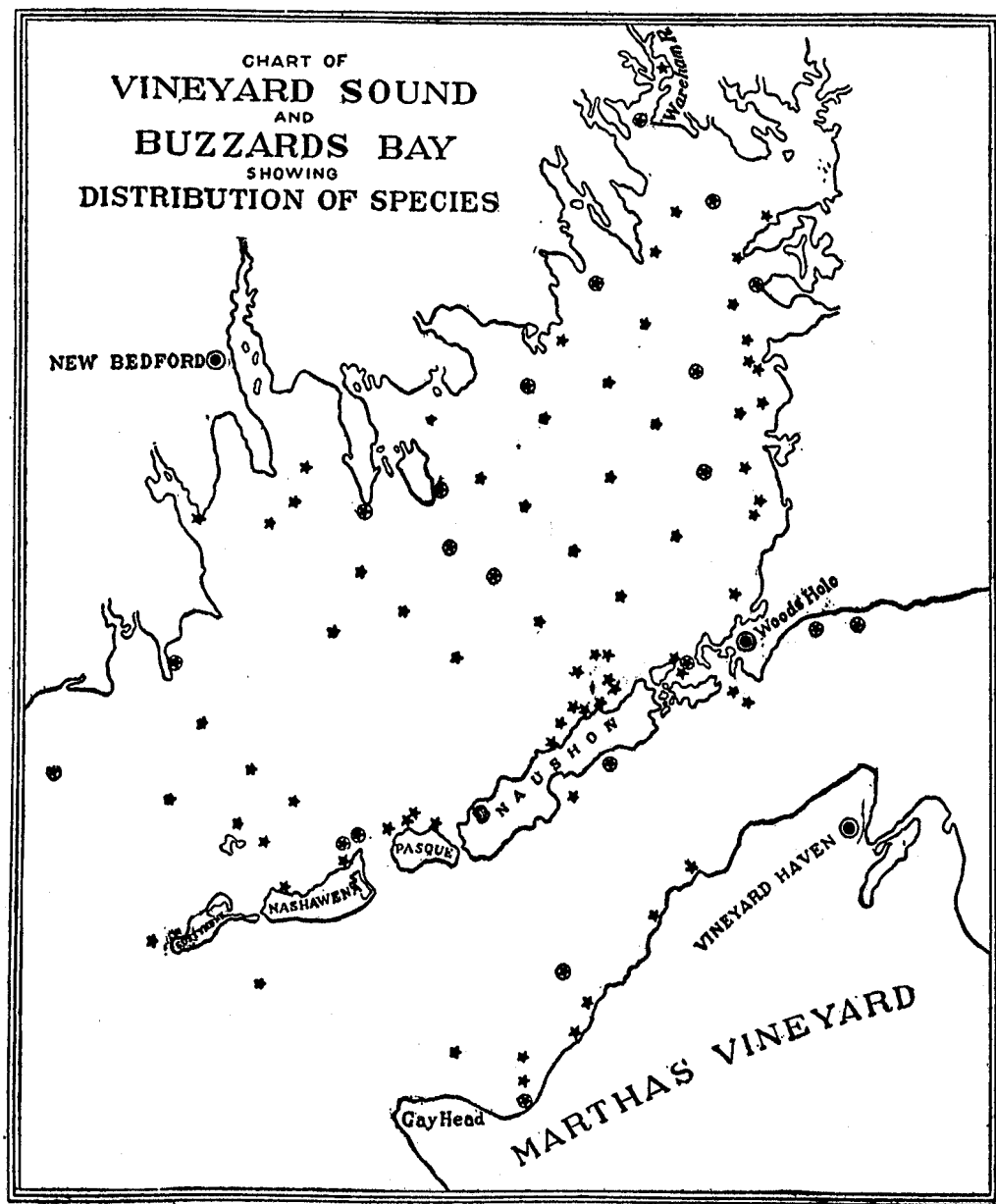
CHART 168.—*Ilyanassa obsoleta*. (See explanation of chart 26.)

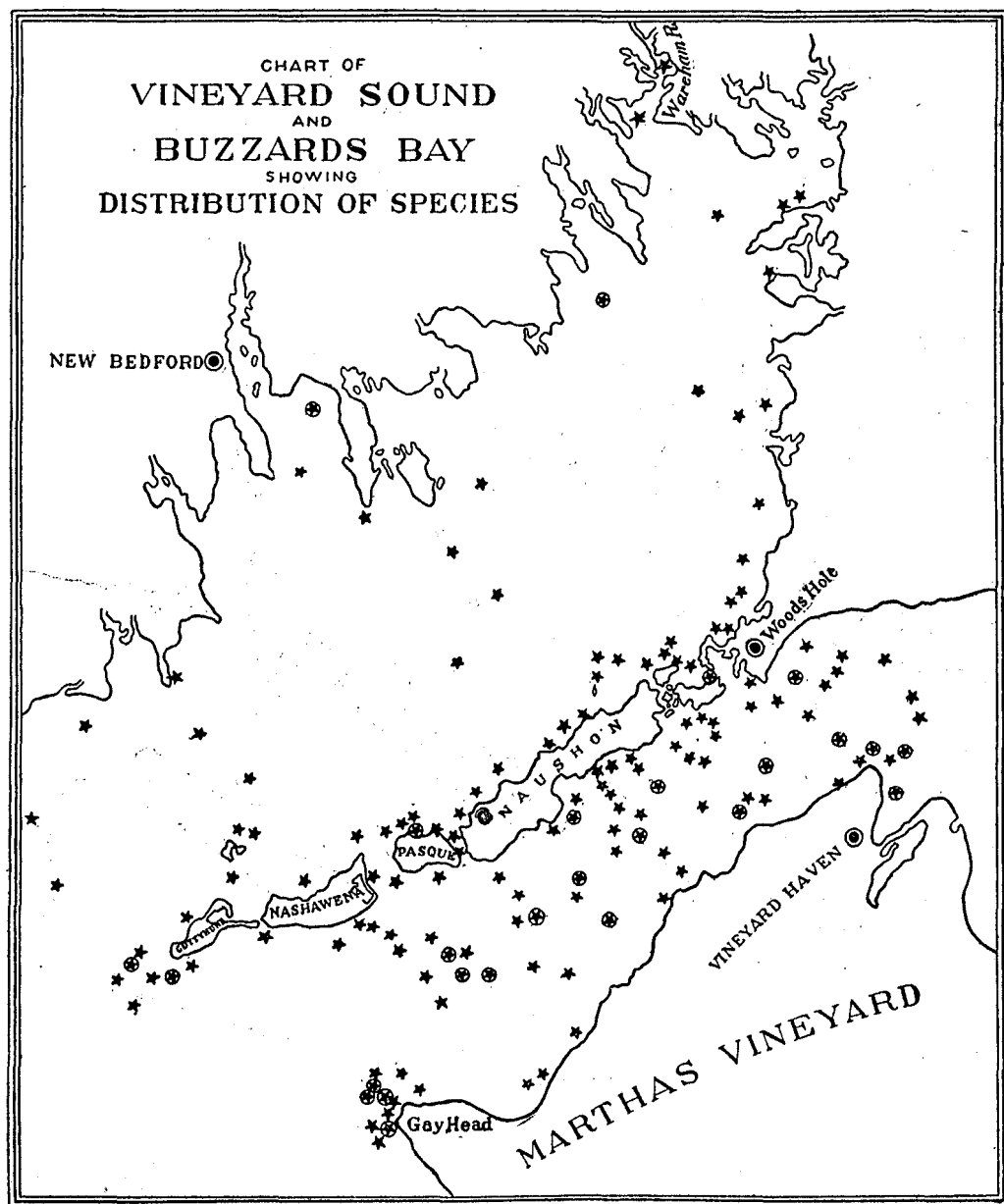
For the most part shells which had been transported by hermit crabs.

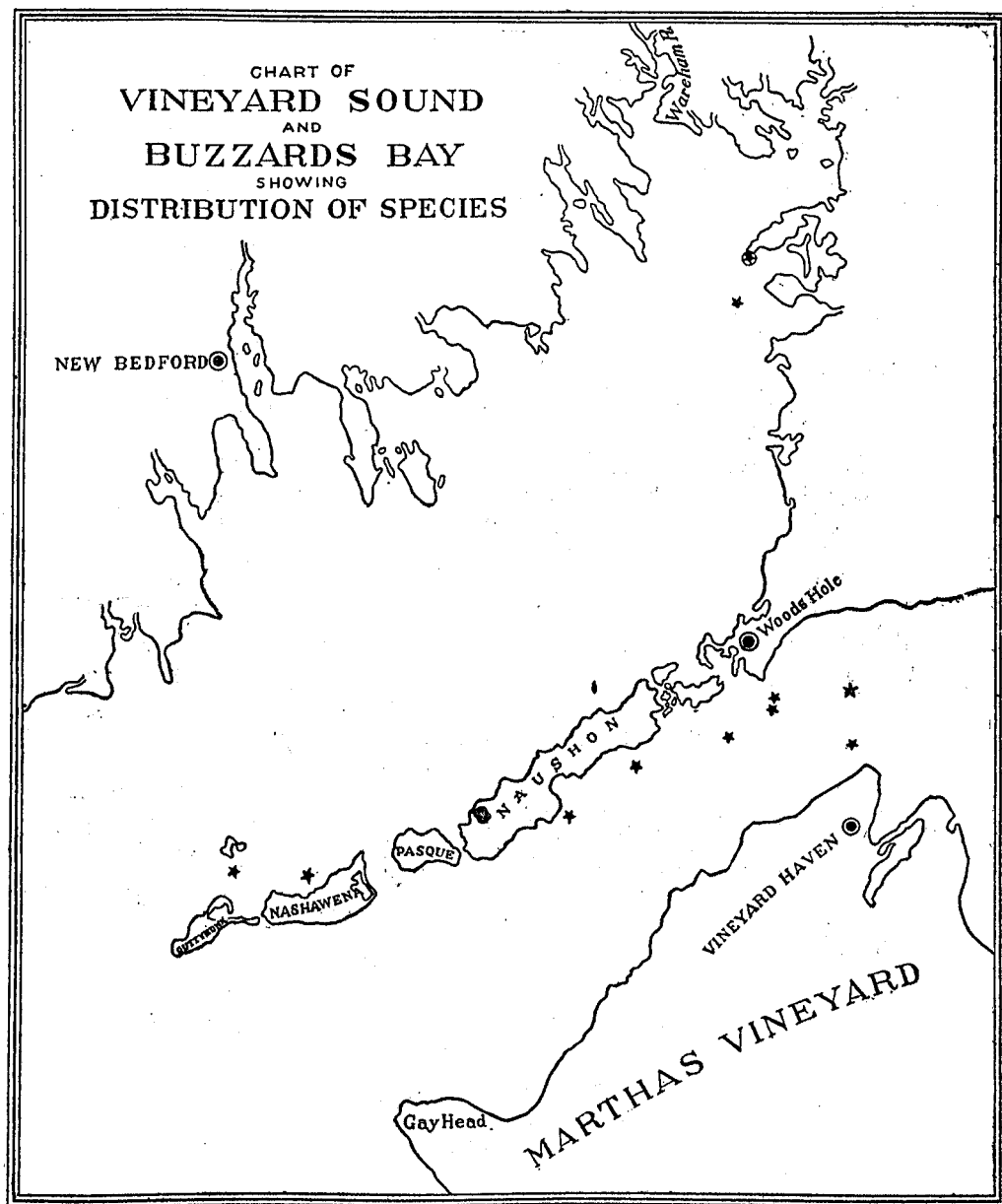


CHART 169.—*Anachis avara*. (See explanation of chart 26.)

CHART 170.—*Astyris lunata*. (See explanation of chart 26.)

CHART 171.—*Eupleura caudata*. (See explanation of chart 26.)

CHART 172.—*Urosalpinx cinereus*. (See explanation of chart 26.)

CHART 173.—*Eulima conoidea*. (See explanation of chart 26.)

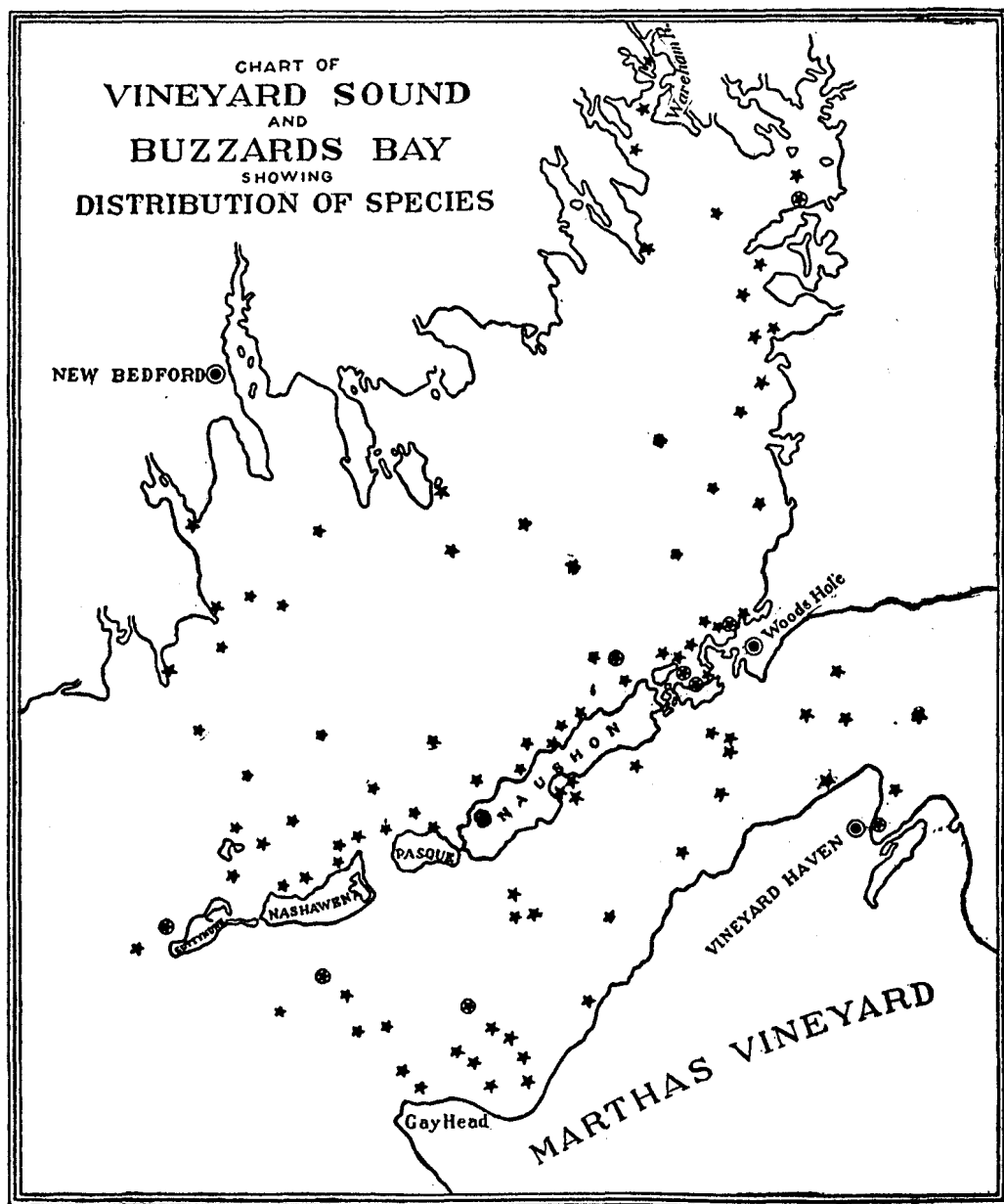


CHART 174.—*Turbonilla* sp. (See explanation of chart 26.)

Owing to a confusion in the earlier records, the distribution of all members of this genus has been plotted upon a single chart.

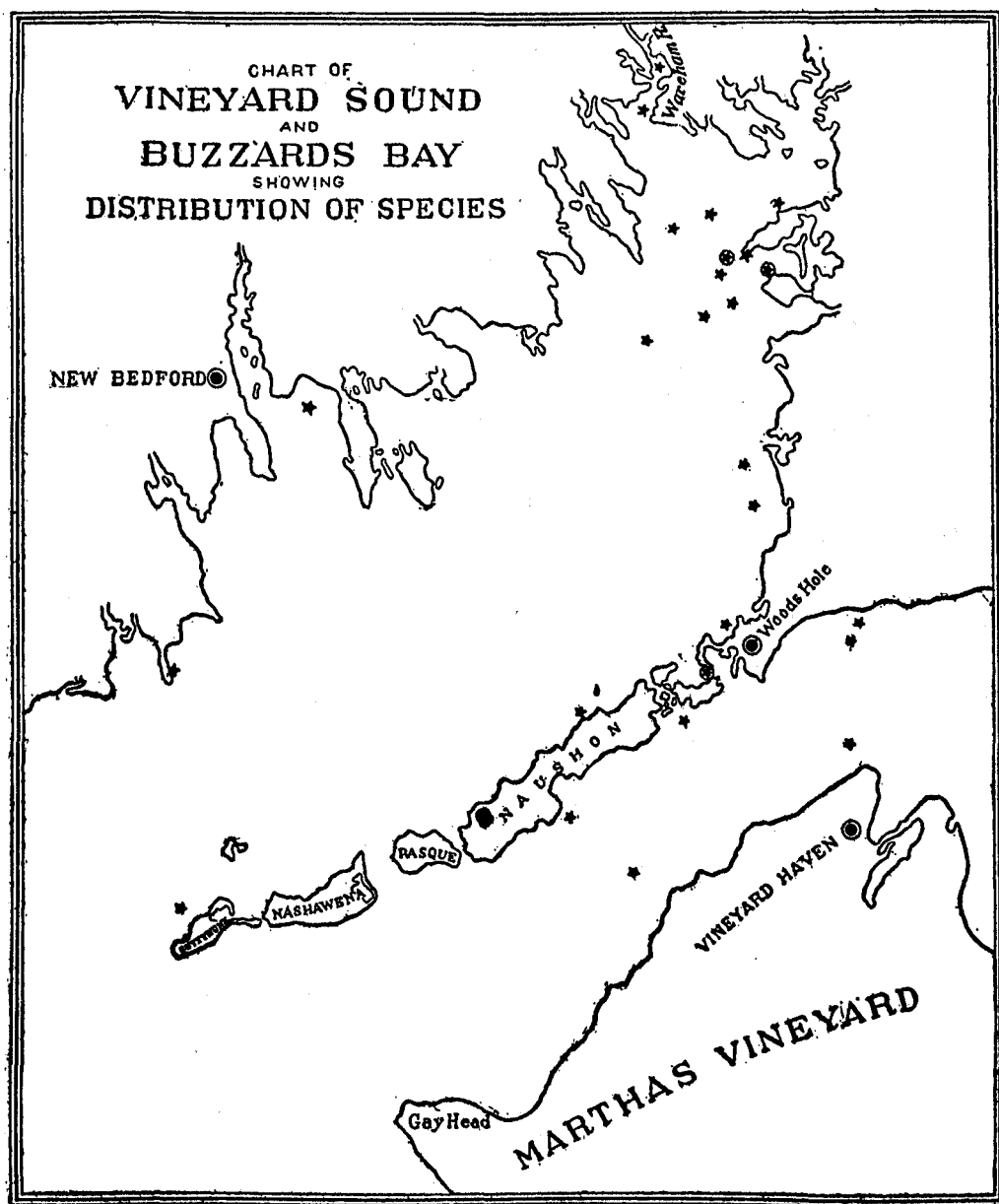
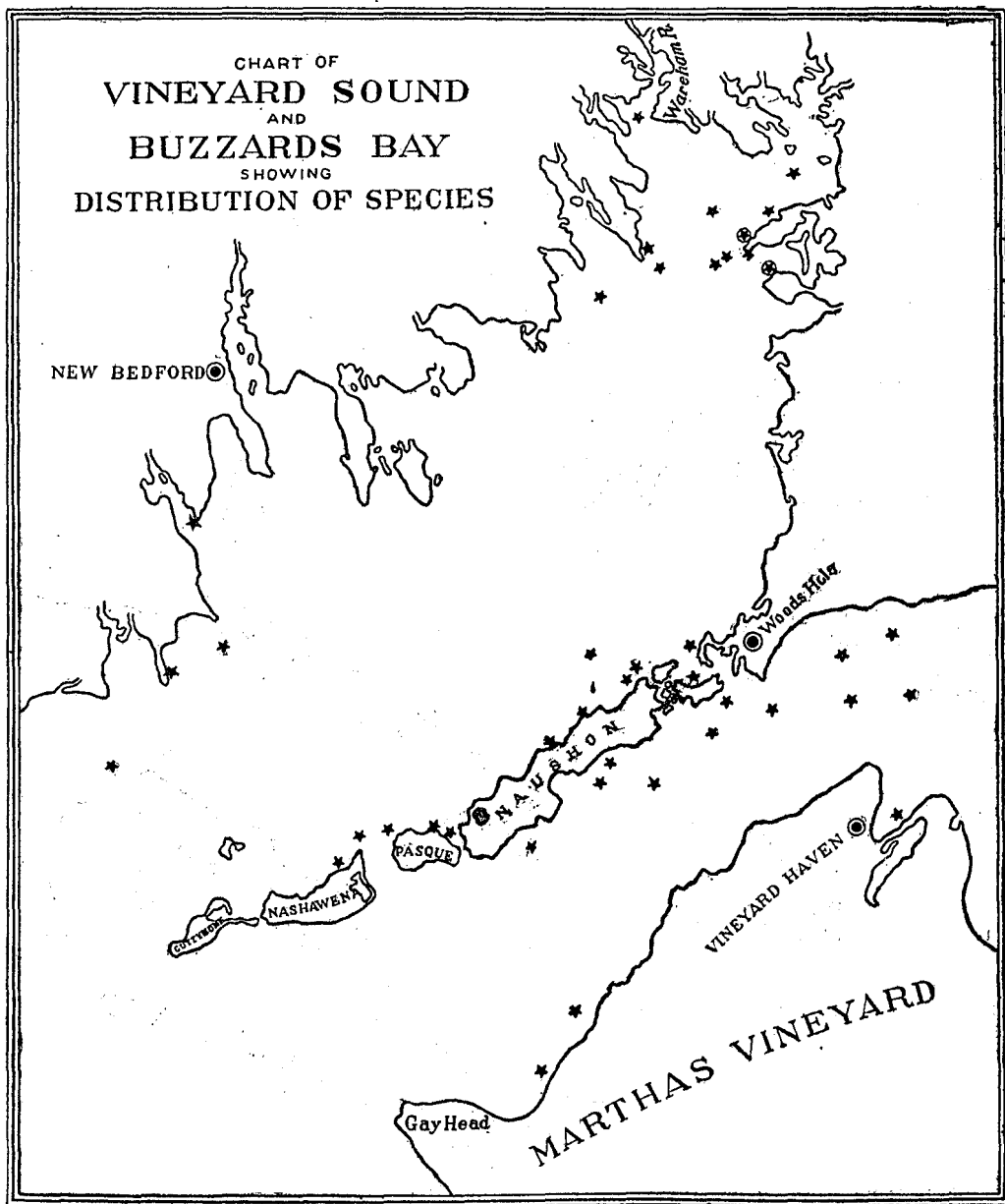
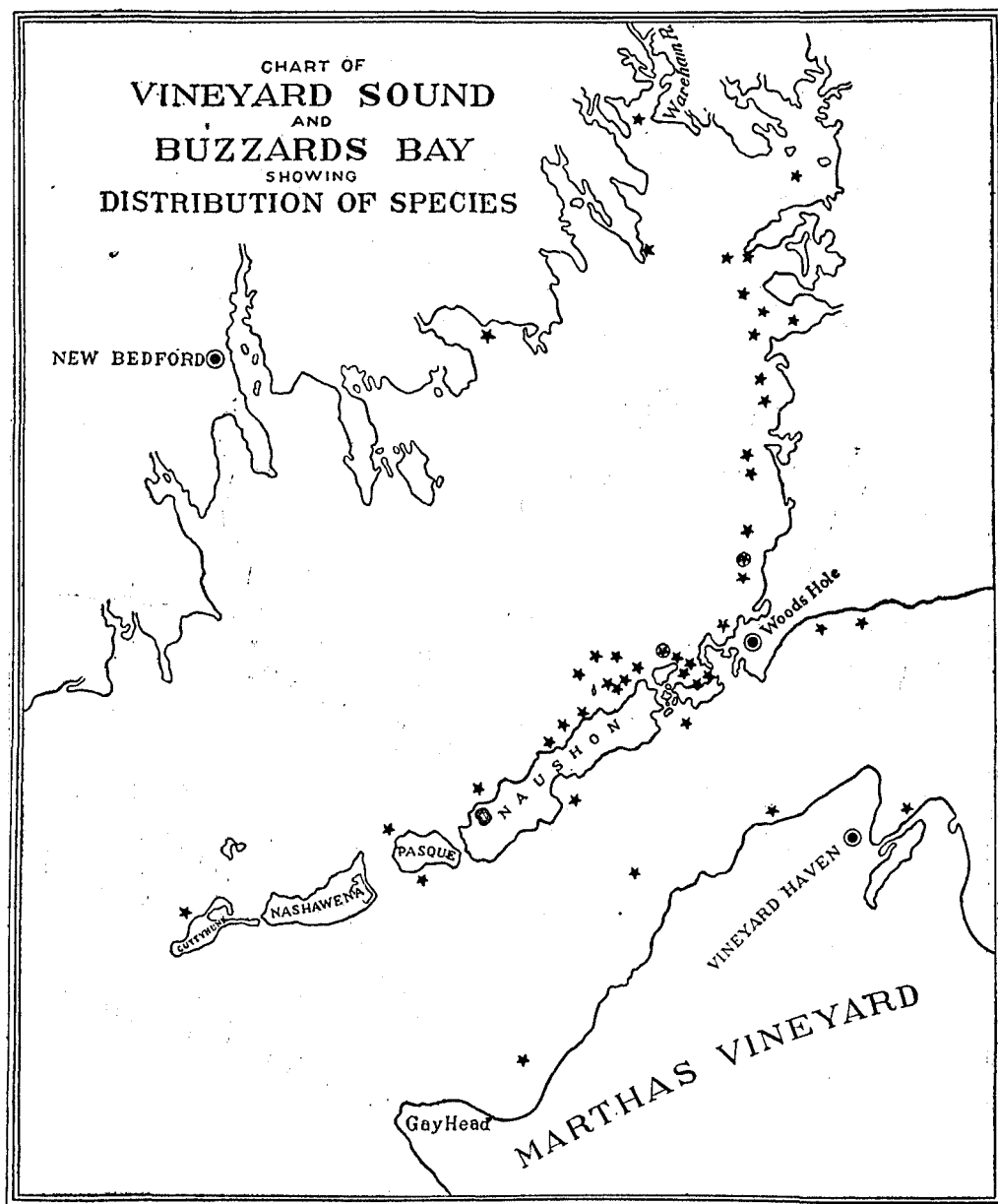
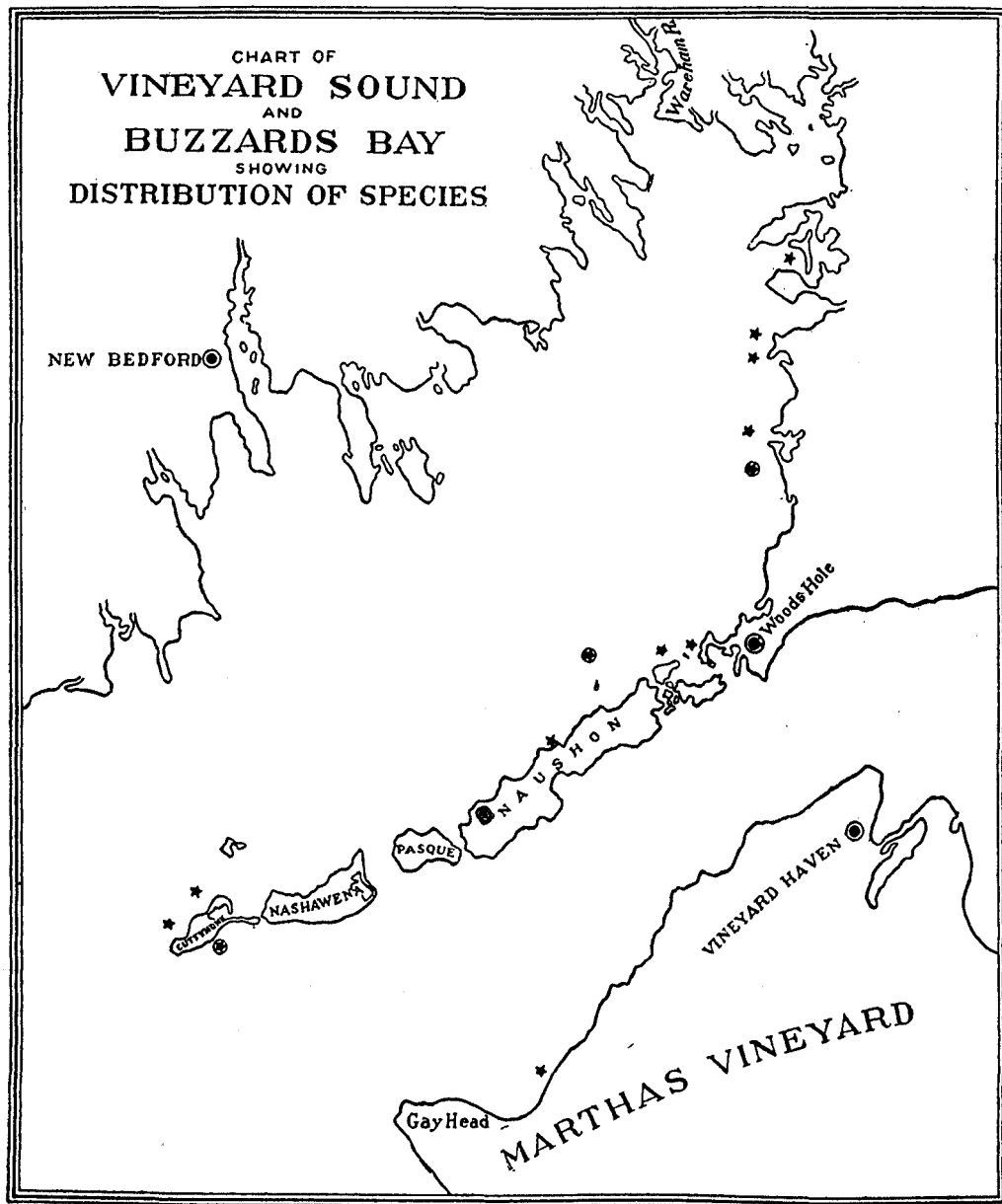


CHART 175.—*Seila terebralis*. (See explanation of chart 26.)

CHART 176.—*Cerithiopsis emersonii*. (See explanation of chart 26.)



CHART 177.—*Bittium alternatum*. (See explanation of chart 26.)

CHART 178.—*Cæcum cooperi*. (See explanation of chart 26.)

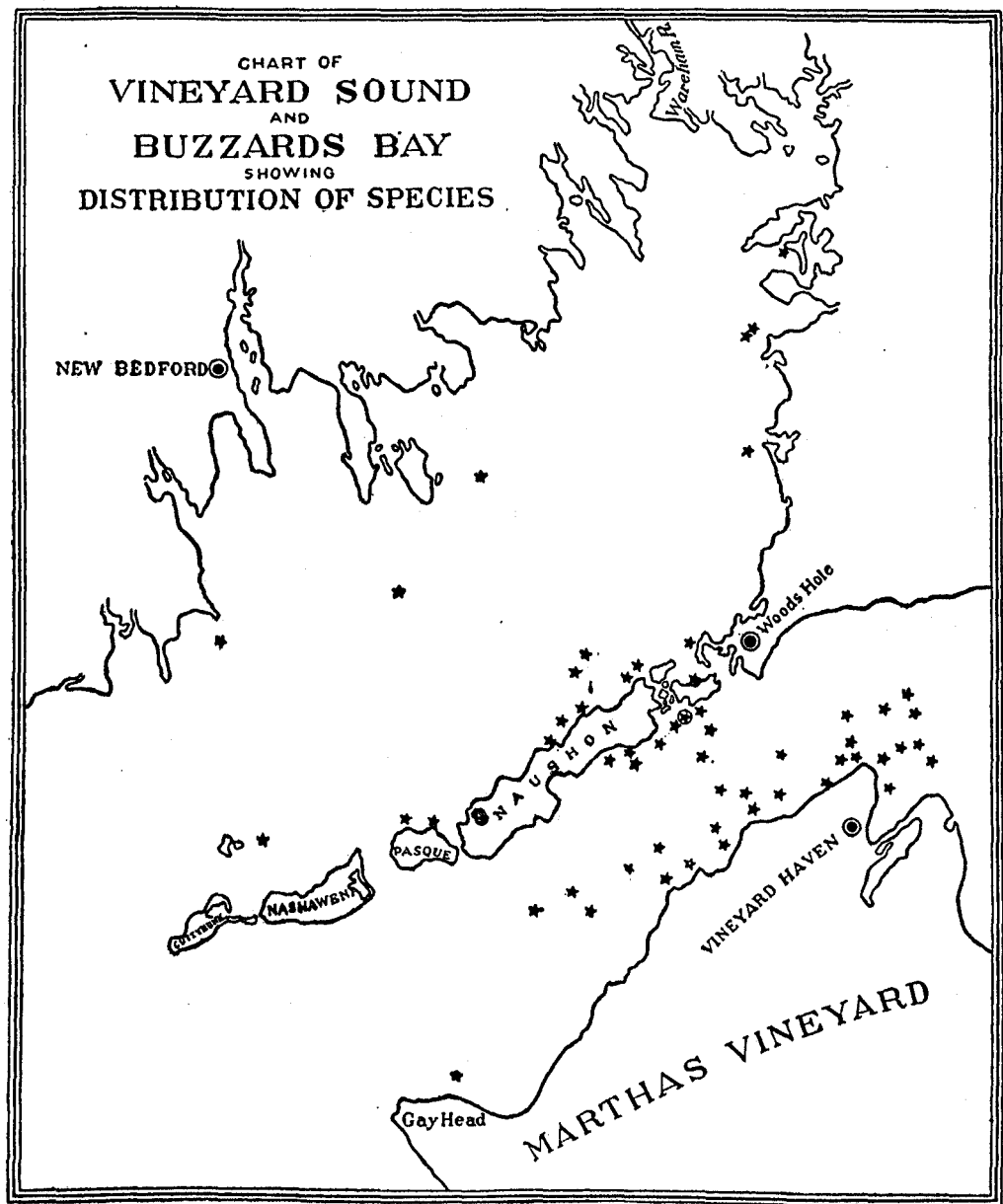


CHART 179.—*Vermicularia spirata*. (See explanation of chart 26.)

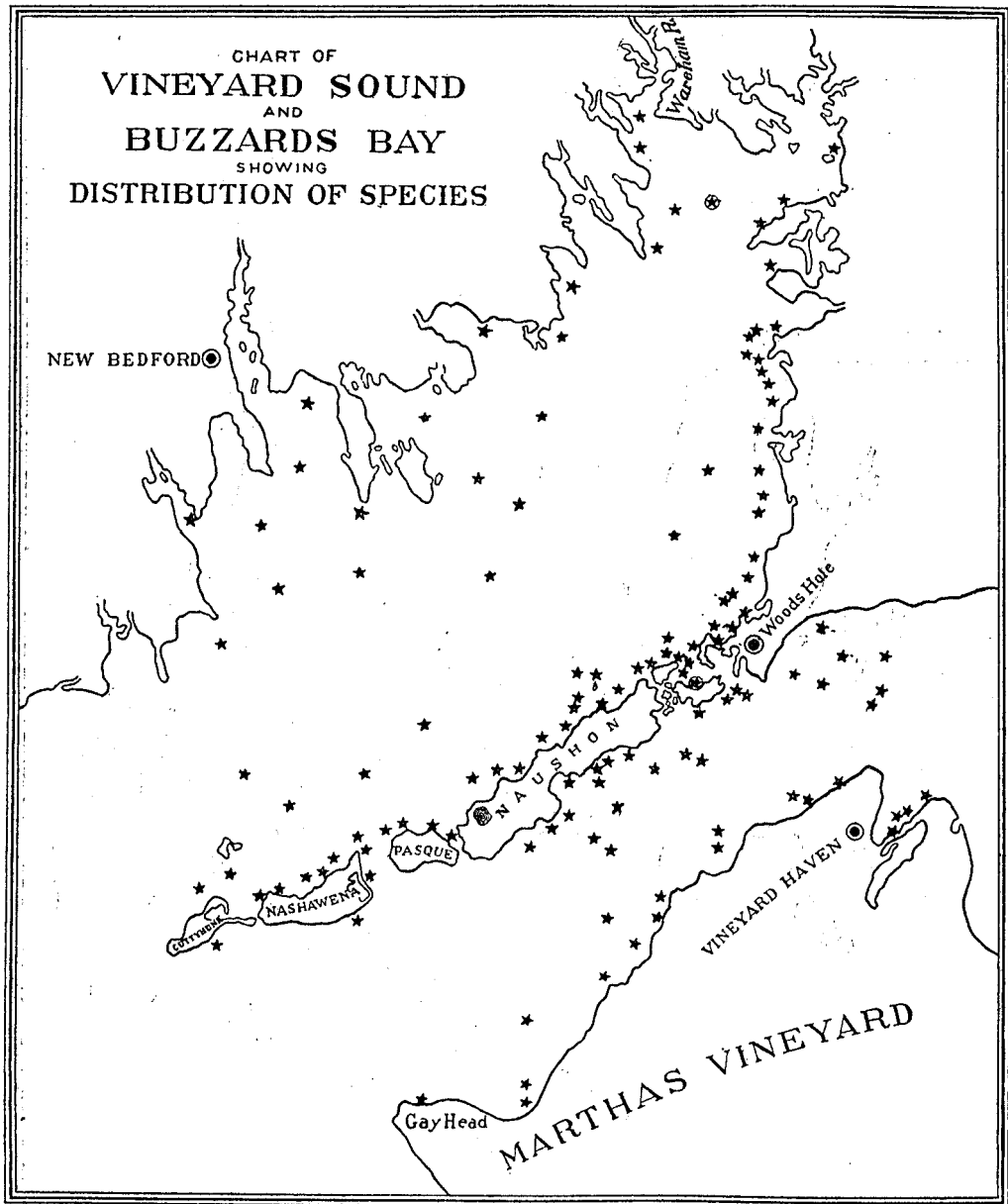


CHART 180.—*Littorina litorea*. (See explanation of chart 26.)

In nearly every case these records are for shells which had been transported by hermit crabs.

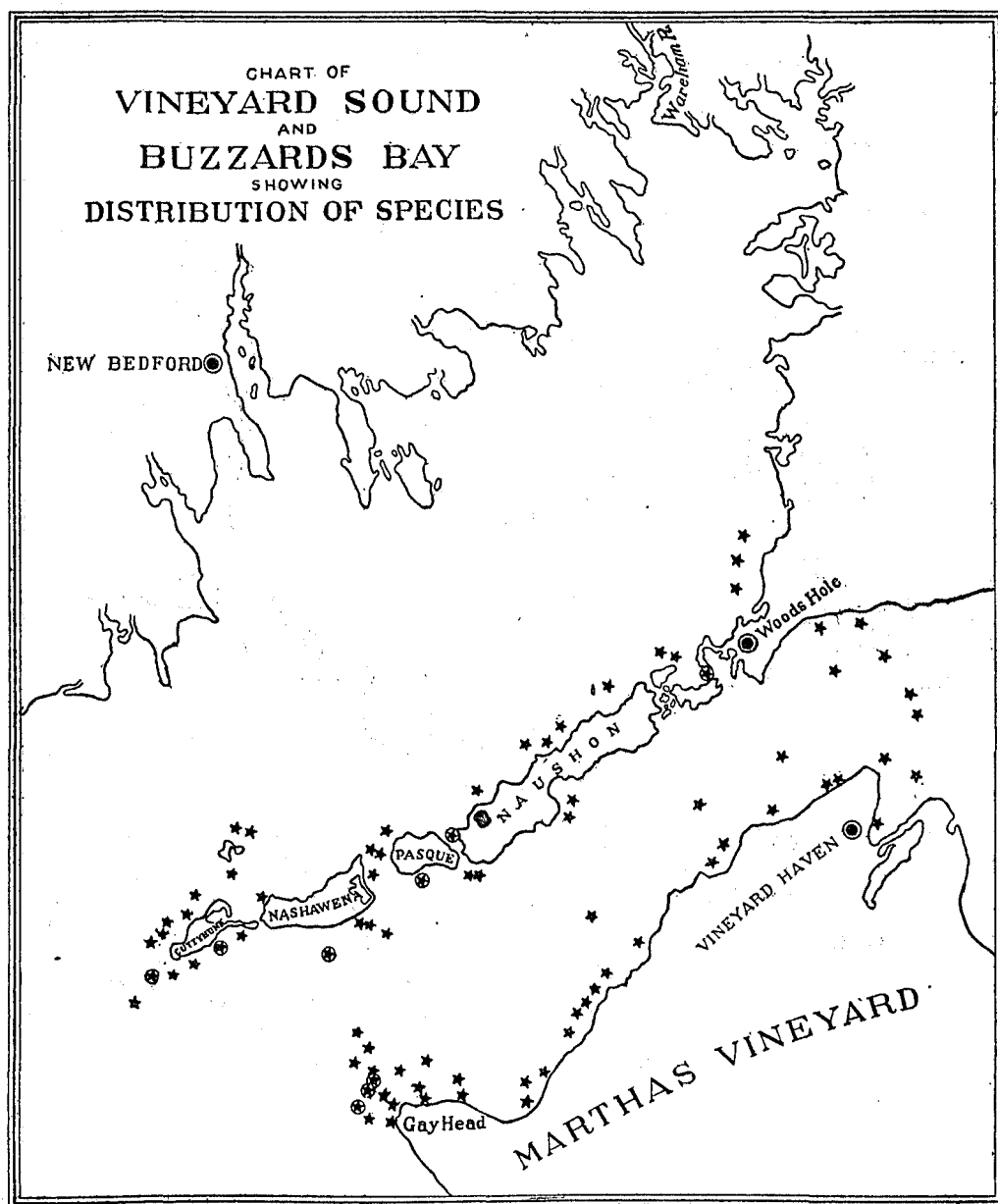
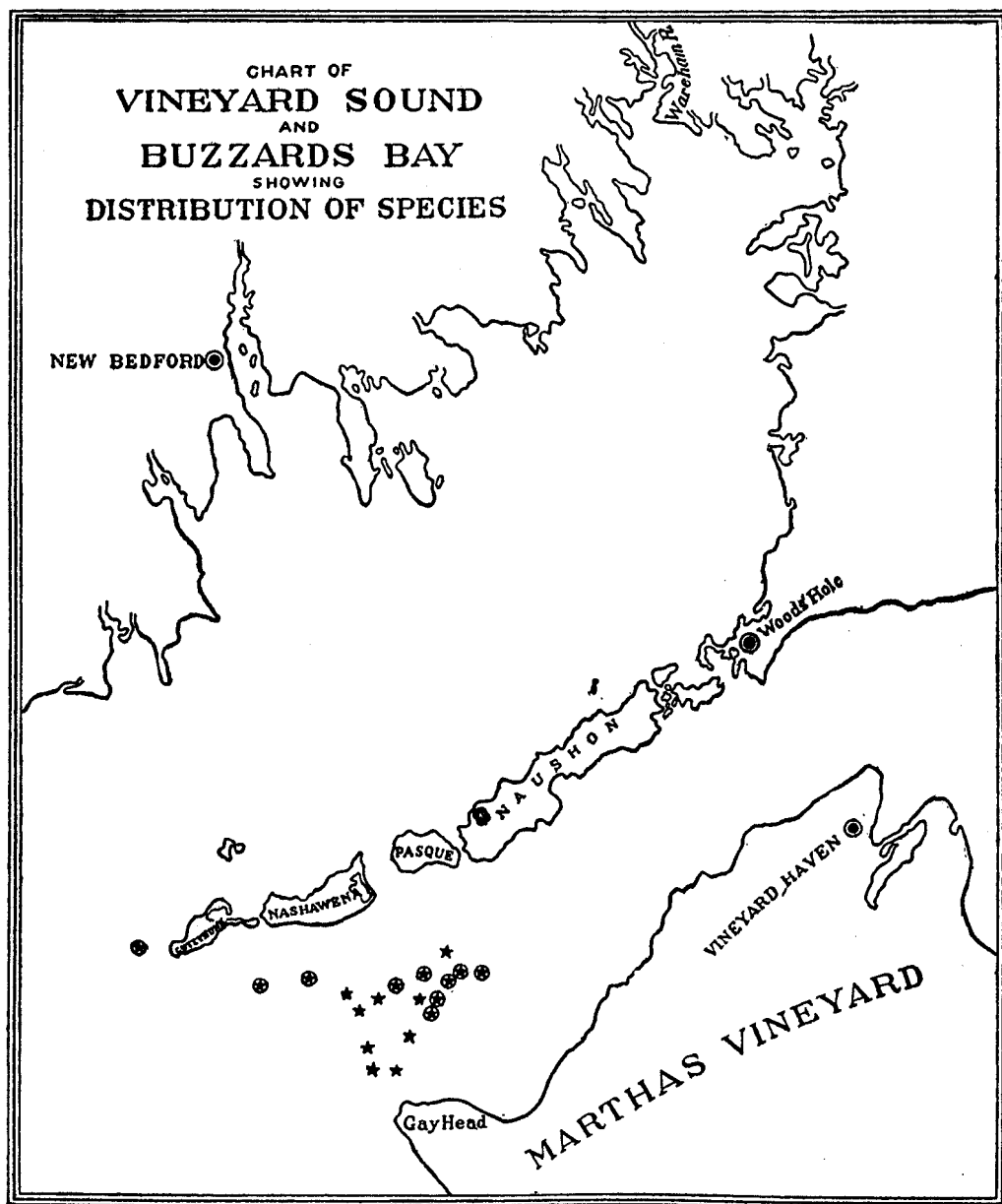
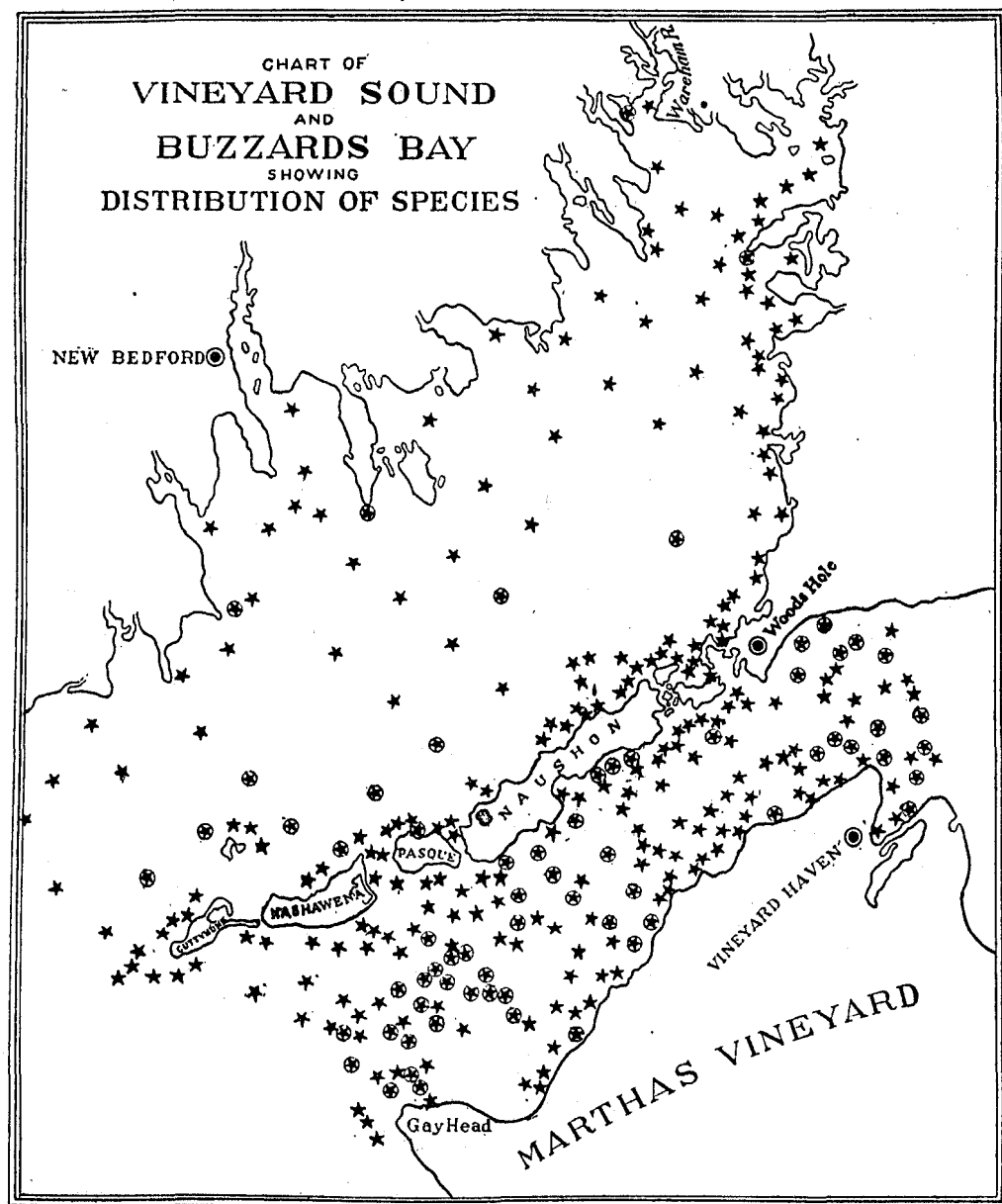


CHART 181.—*Lacuna puteola*. (See explanation of chart 26.)

CHART 182.—*Crucibulum striatum*. (See explanation of chart 26.)

CHART 183.—*Crepidula fornicata*. (See explanation of chart 26.)

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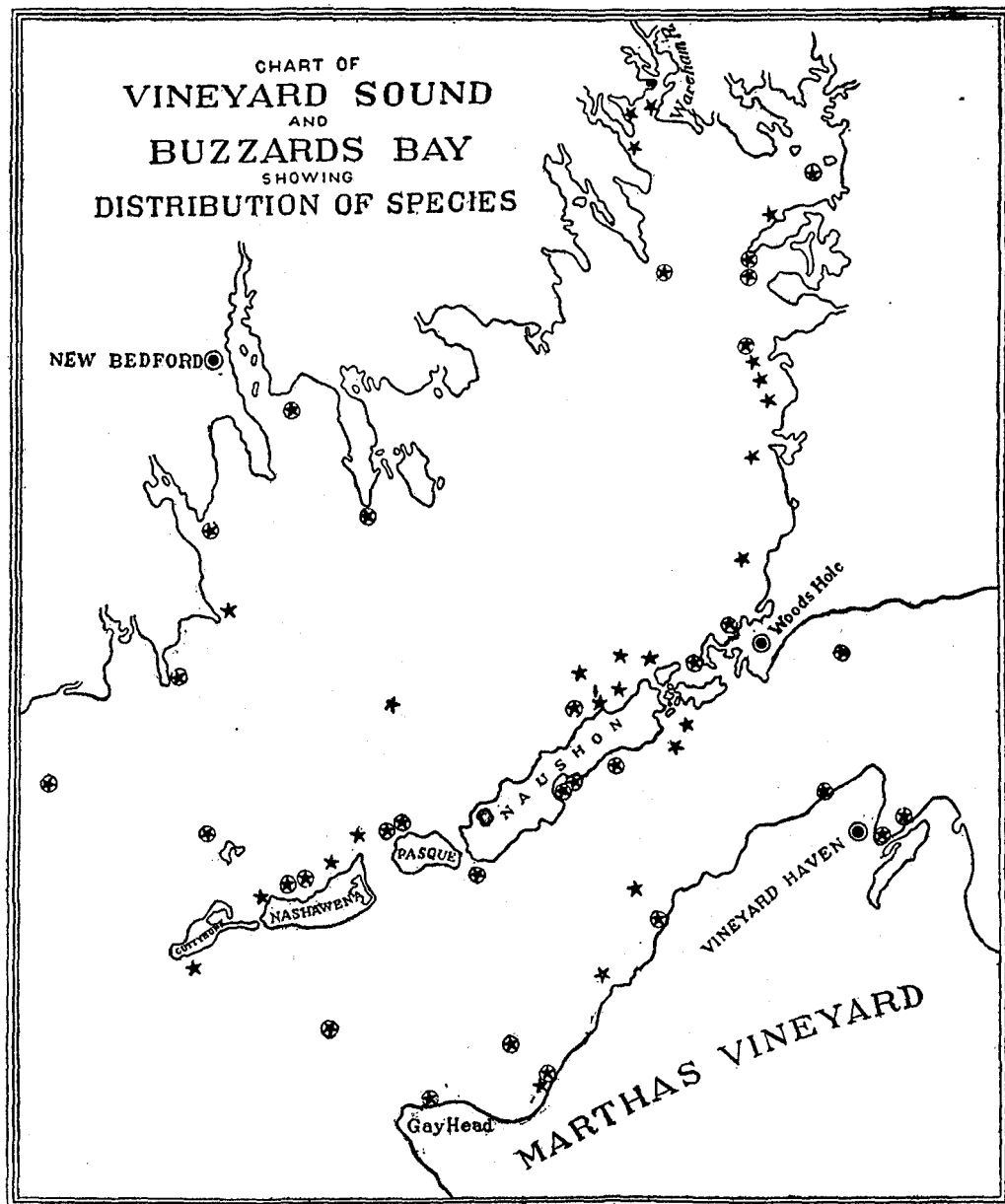
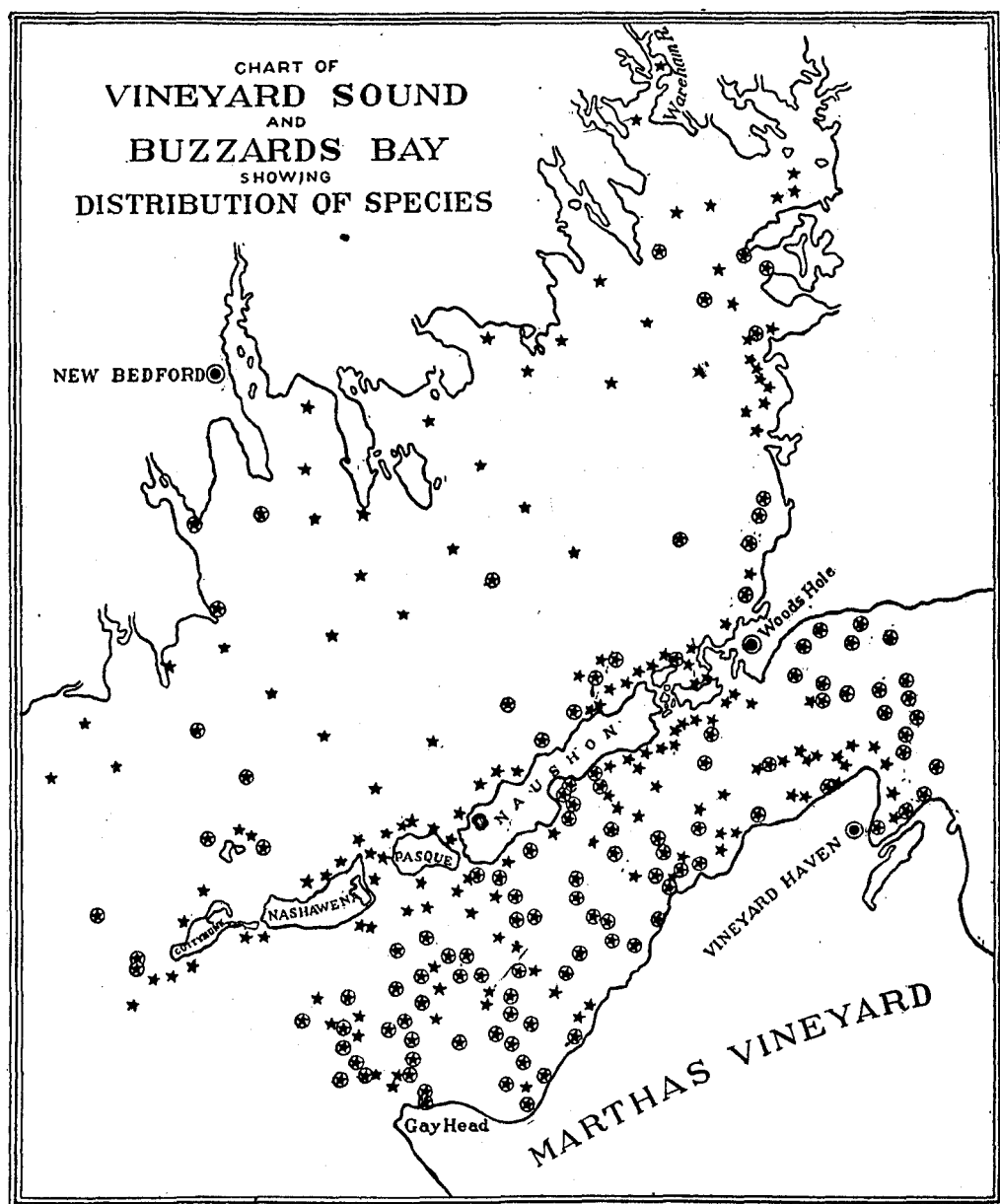


CHART 184.—*Crepidula convexa*. (See explanation of chart 26.)



CHART 185.—*Crepidula plana*. (See explanation of chart 26.)

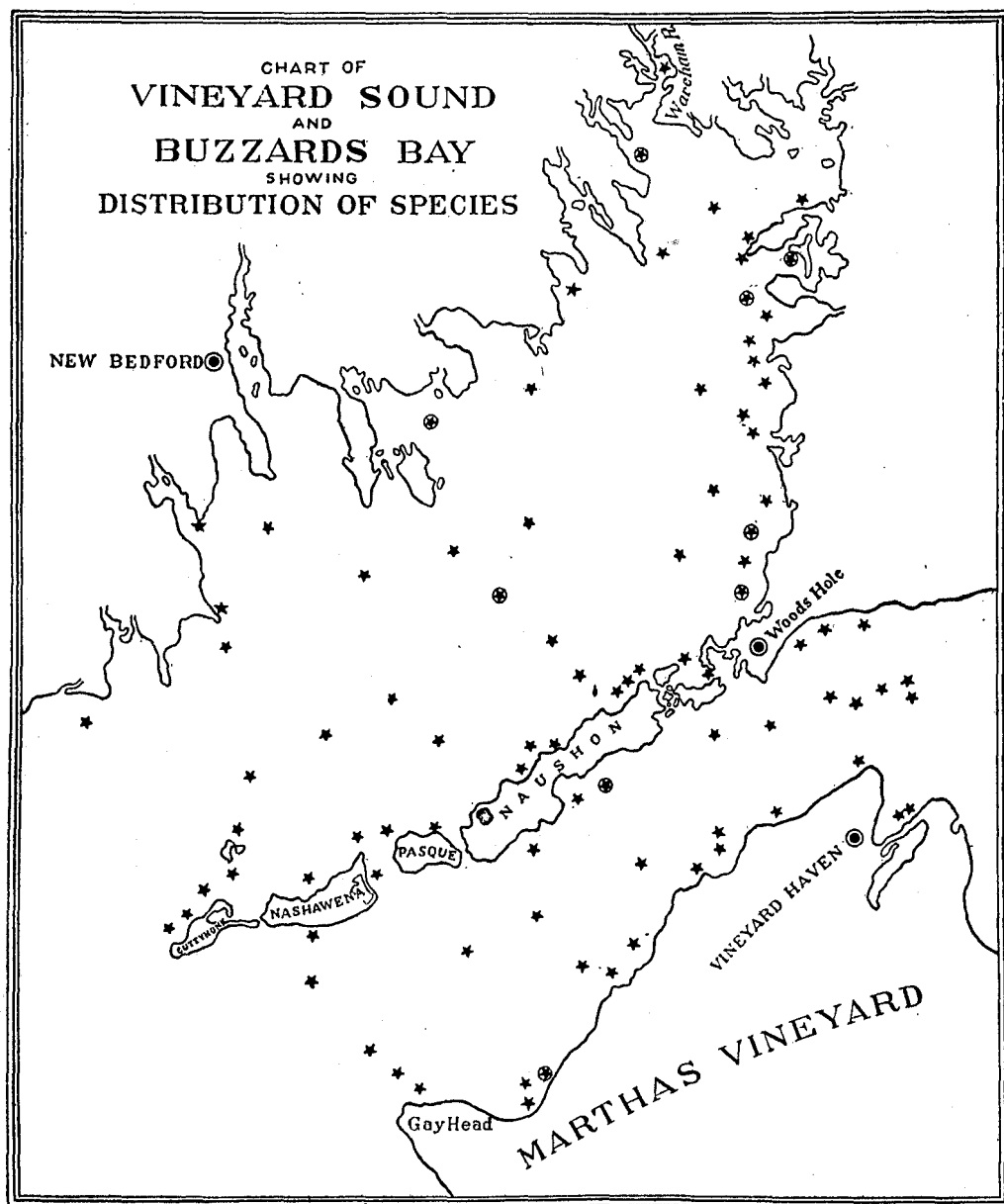
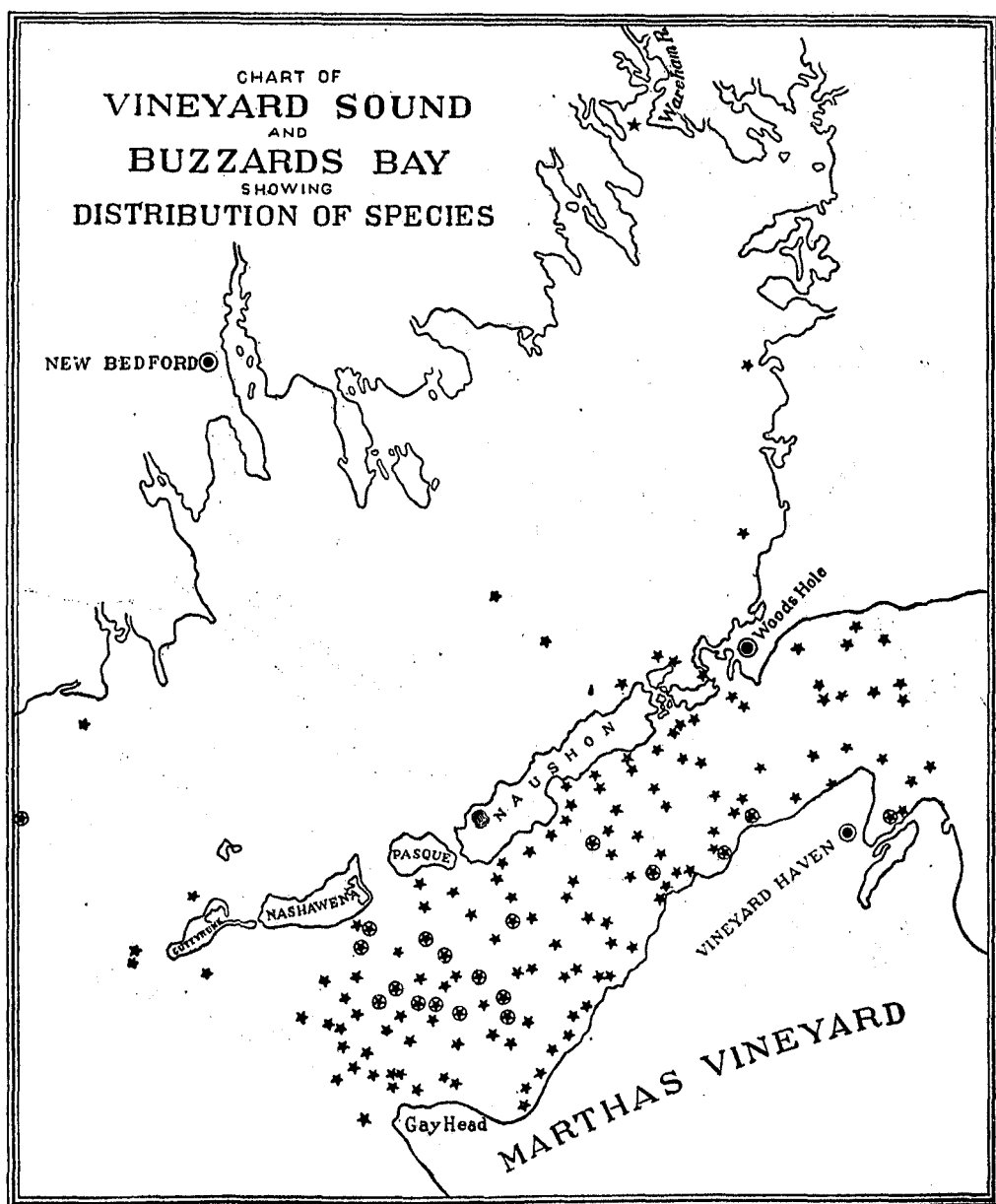


CHART 186.—Polynices duplicata. (See explanation of chart 26.)

CHART 187.—*Polynices heros*. (See explanation of chart 26.)

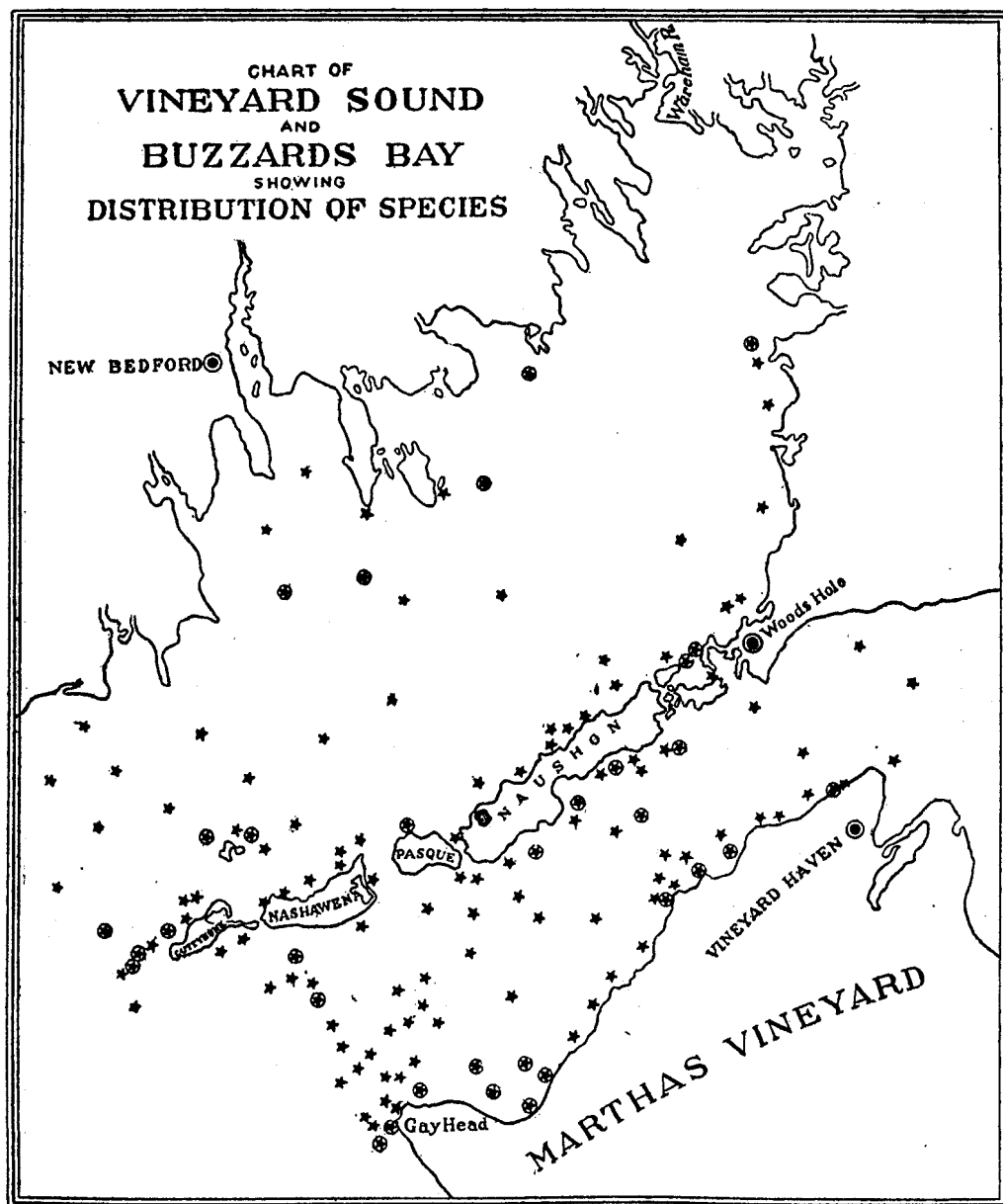
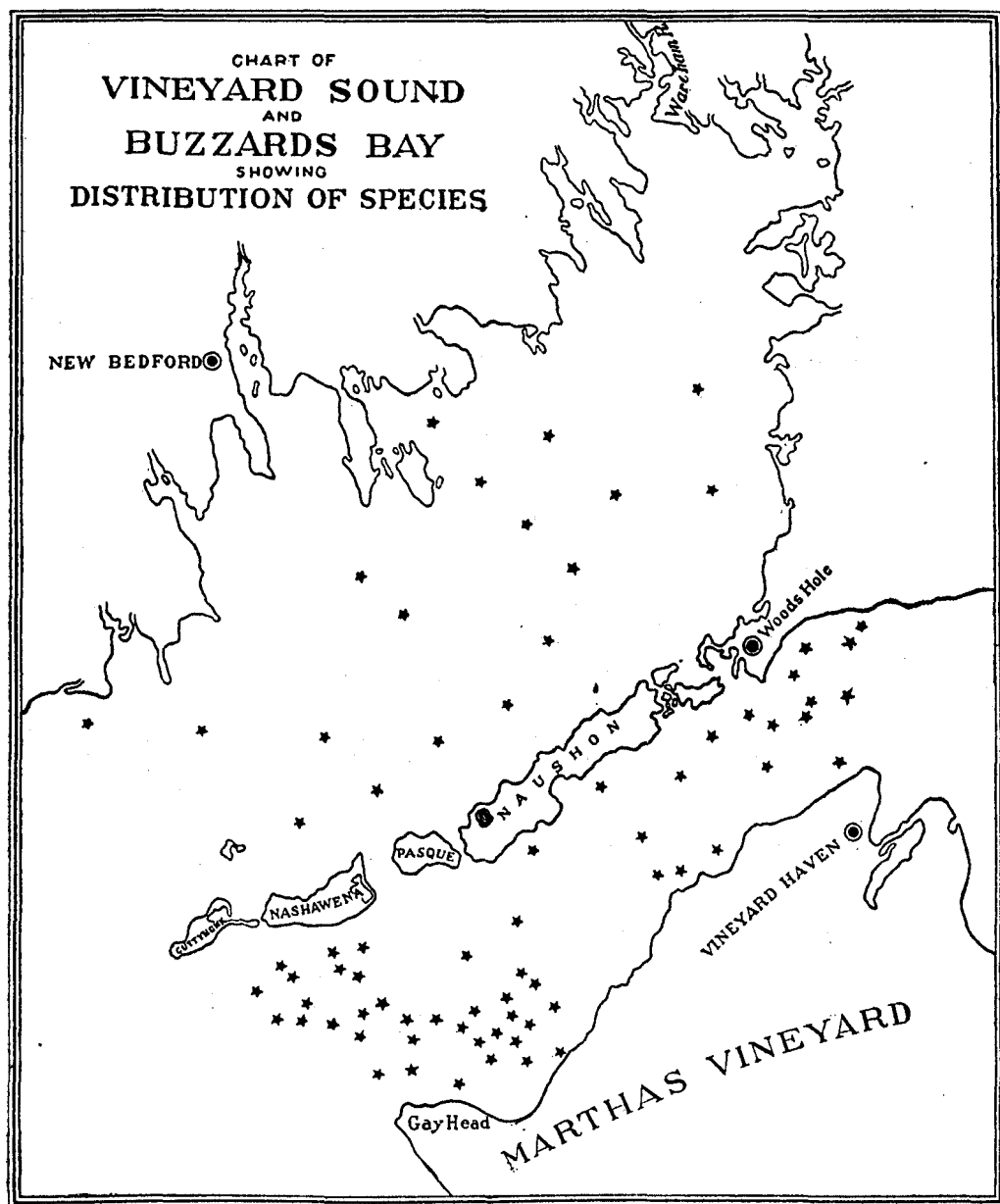


CHART 188.—*Polynices triseriata*. (See explanation of chart 26.)

CHART 189.—*Loligo pealii*.

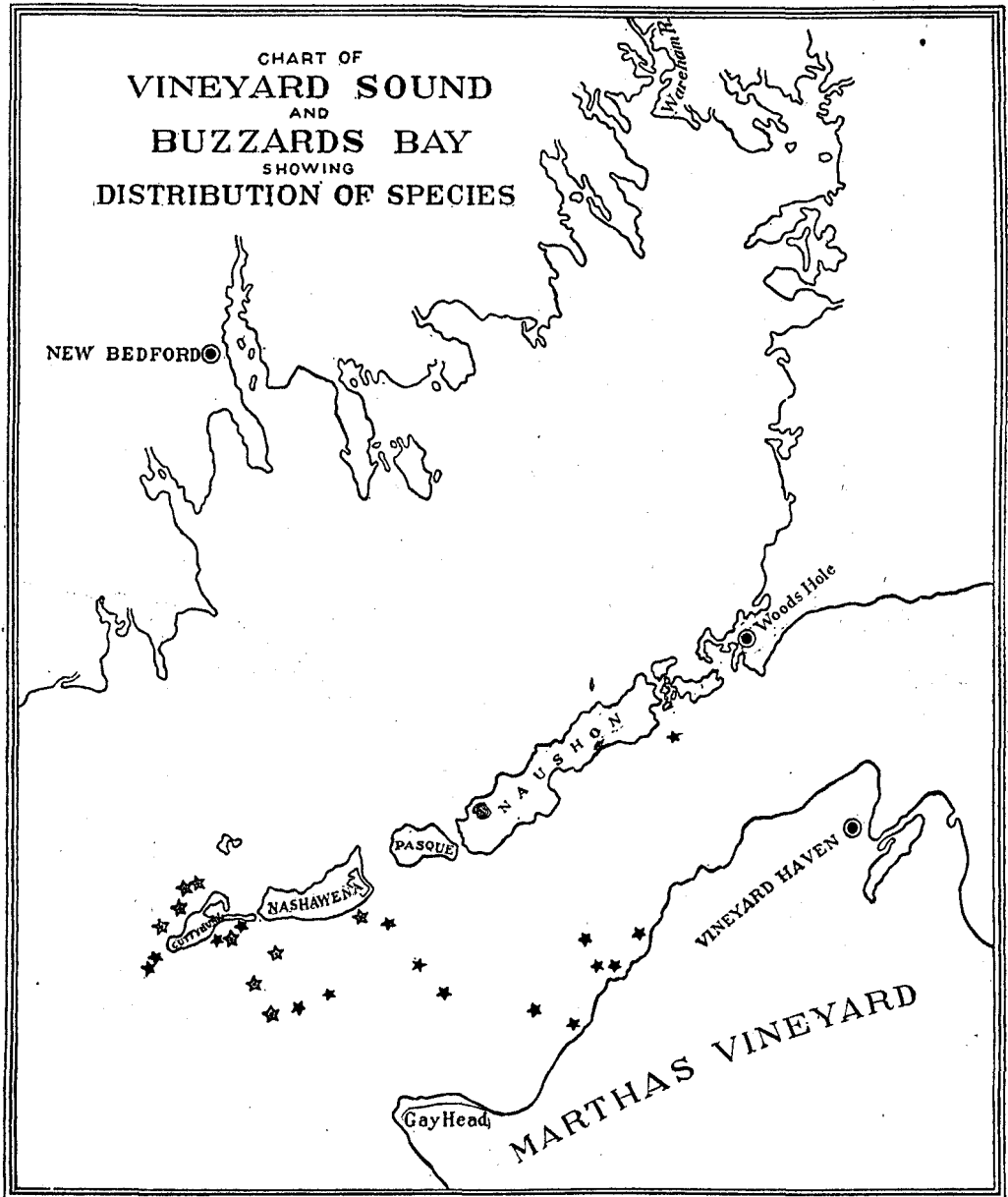


CHART 190.—*Molgula arenata* and *Eugyra glutinans*.

The stars of solid black denote those stations from which the first-named species was recorded, the dotted stars denoting those stations from which the second was recorded. Owing to the probability that these two species were in some cases confused, their occurrence has been plotted upon a single chart.

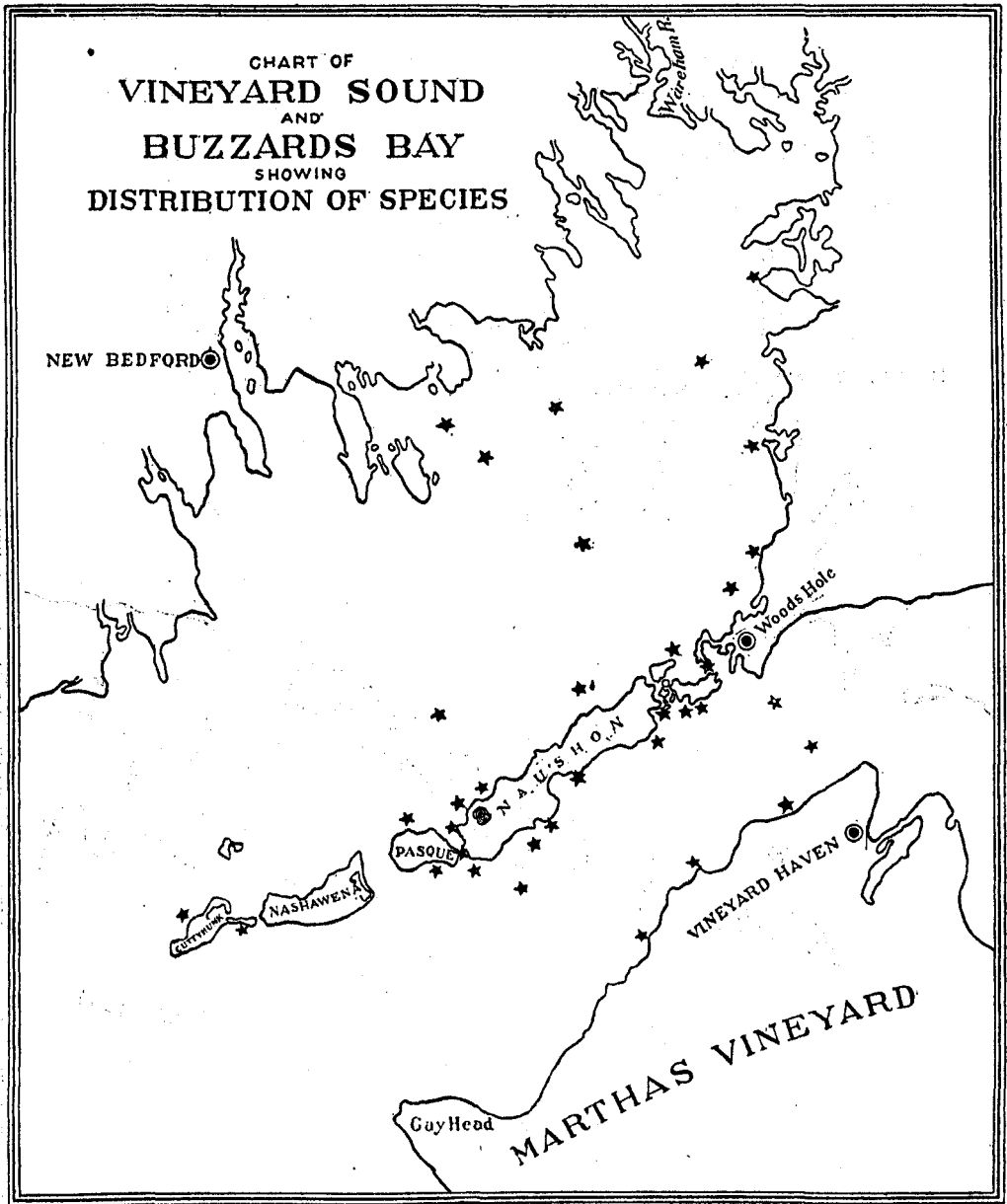
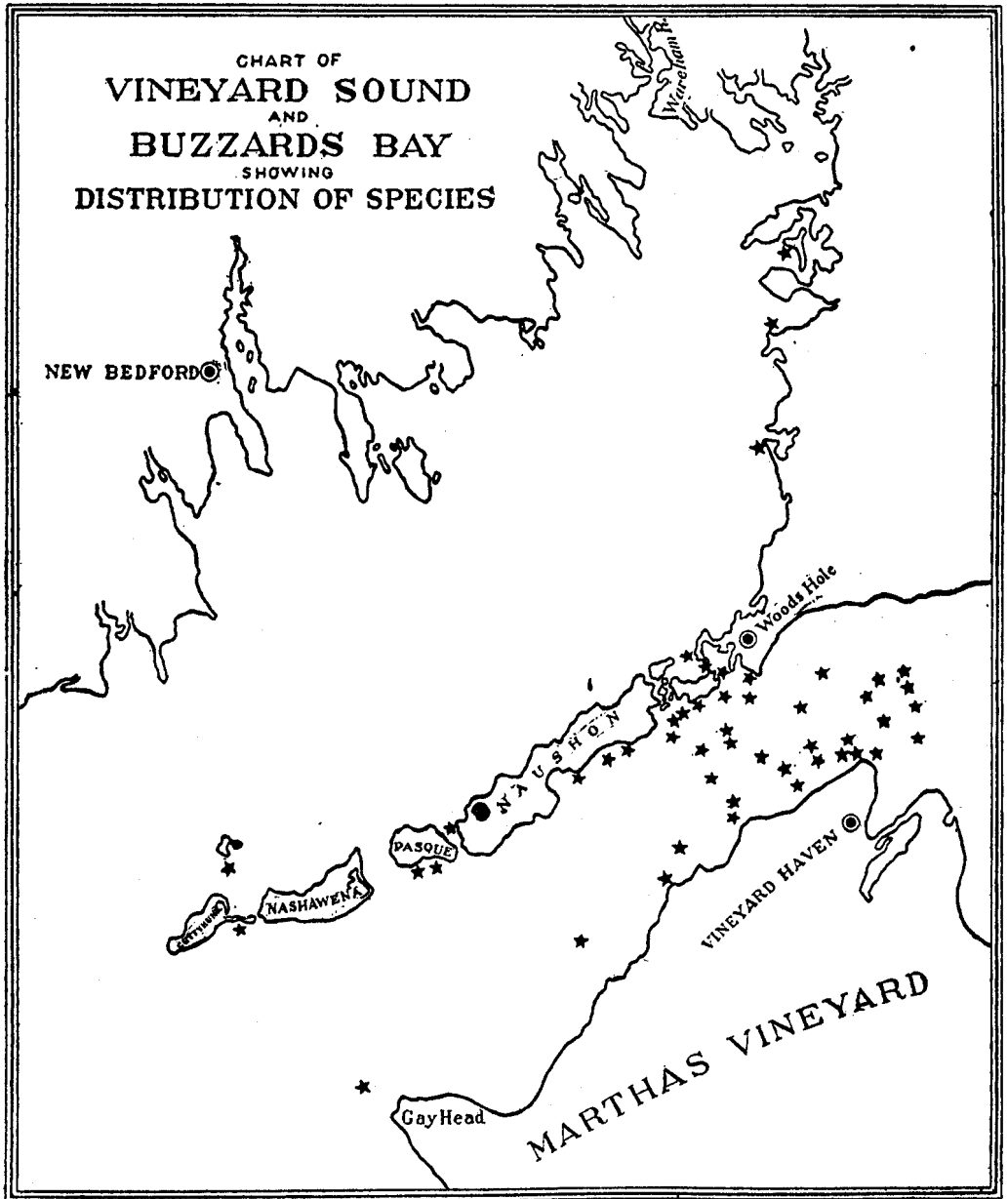
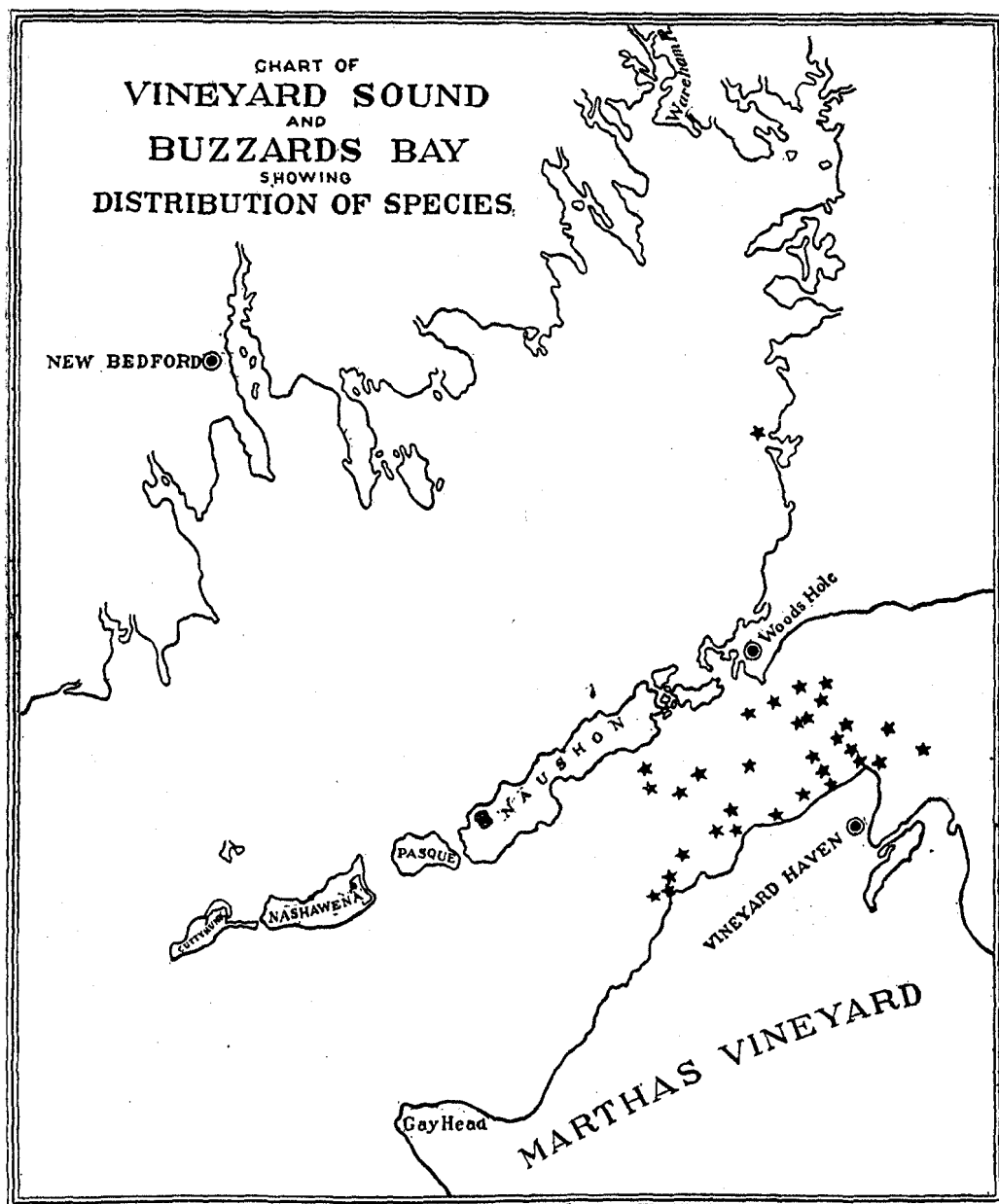
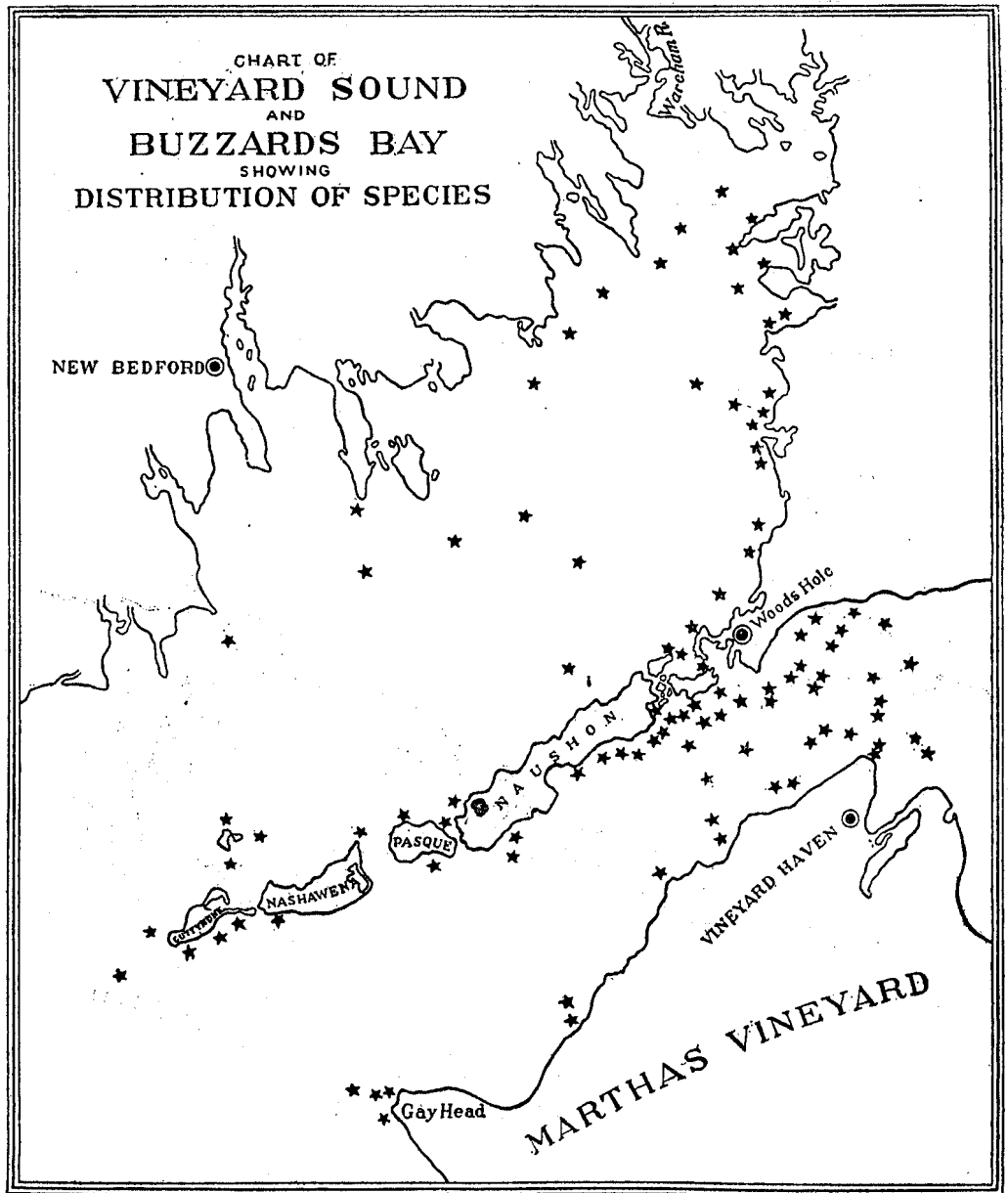


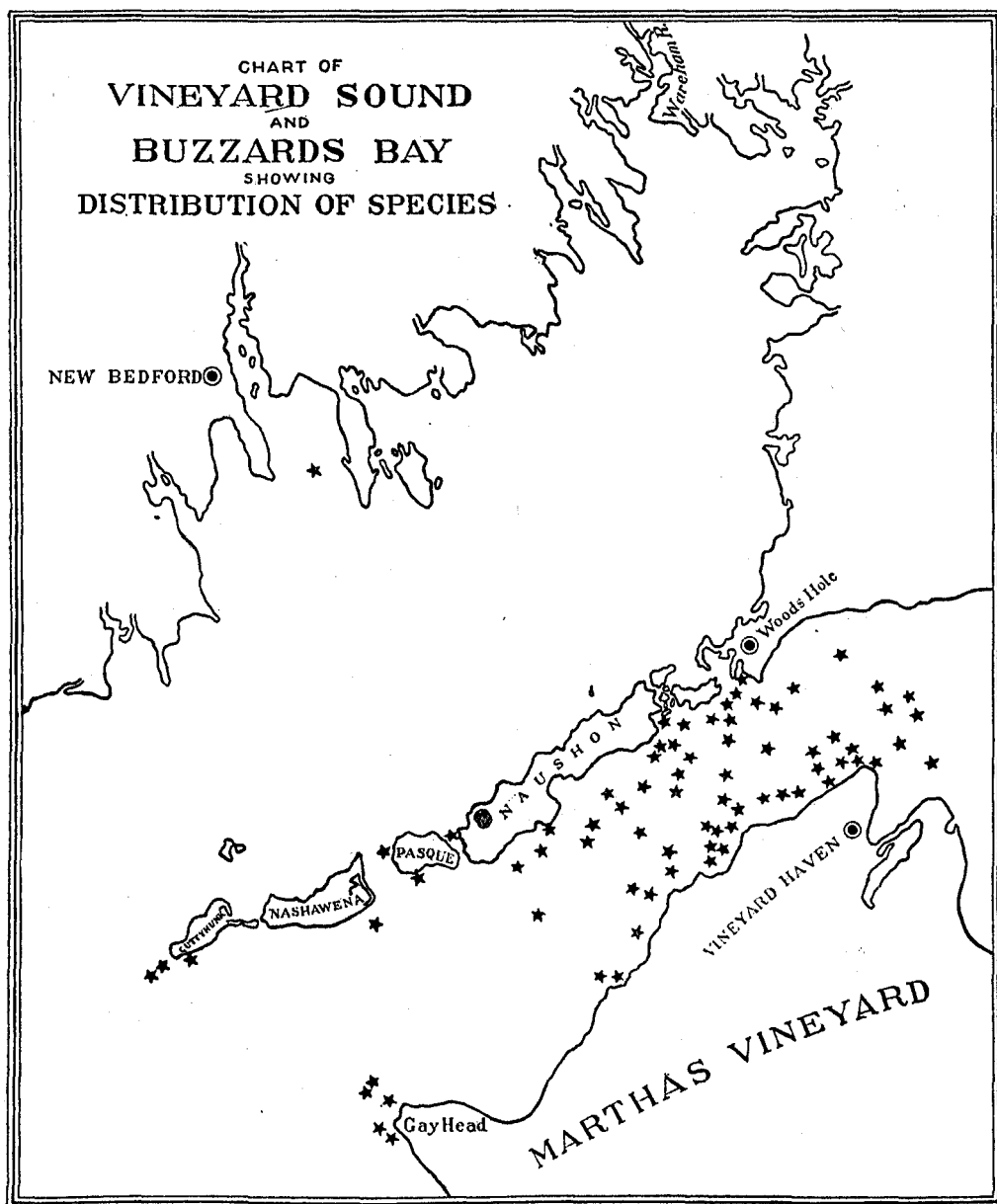
CHART 191.—*Molgula manhattensis*.

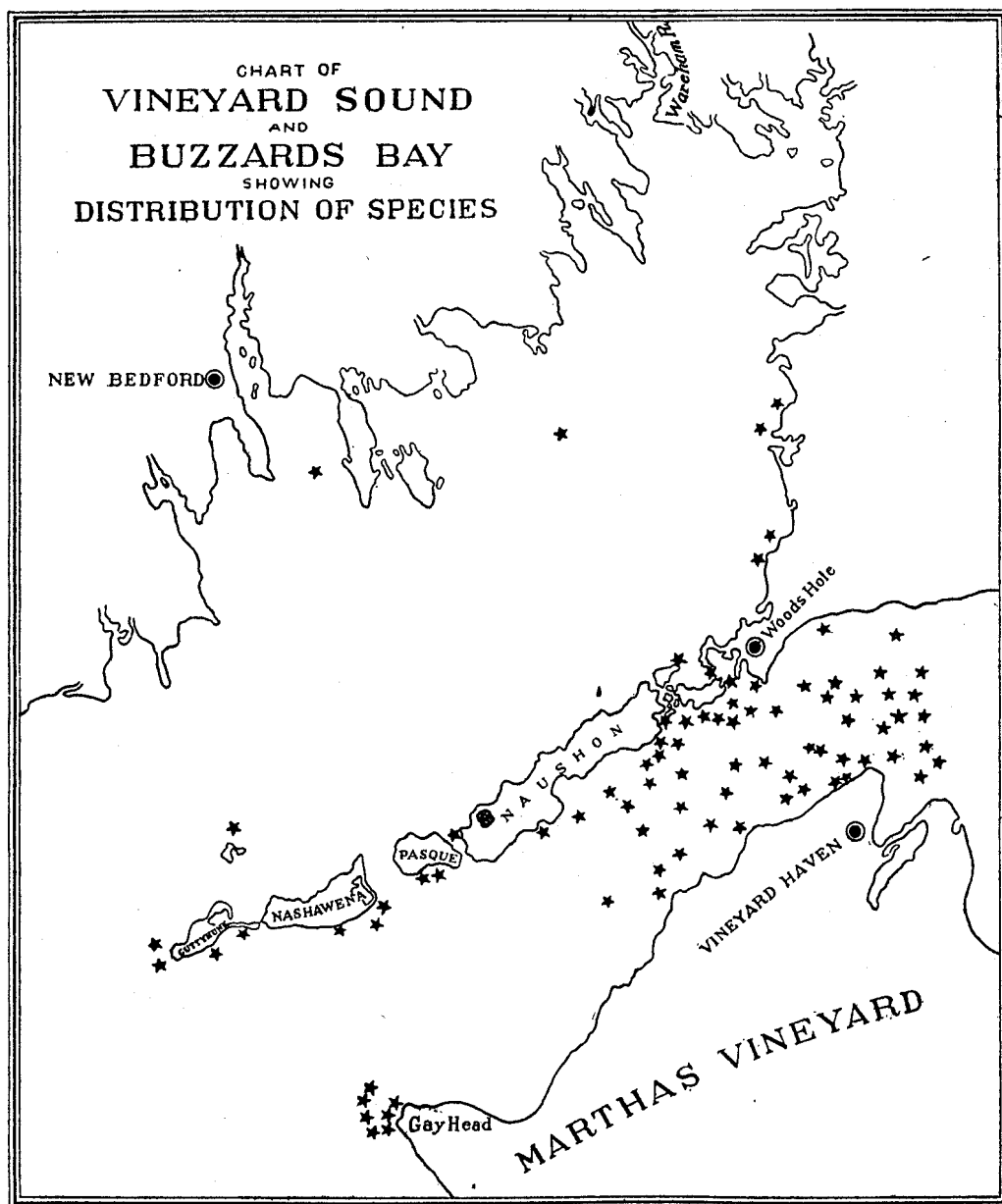
CHART 192.—*Styela partita*.

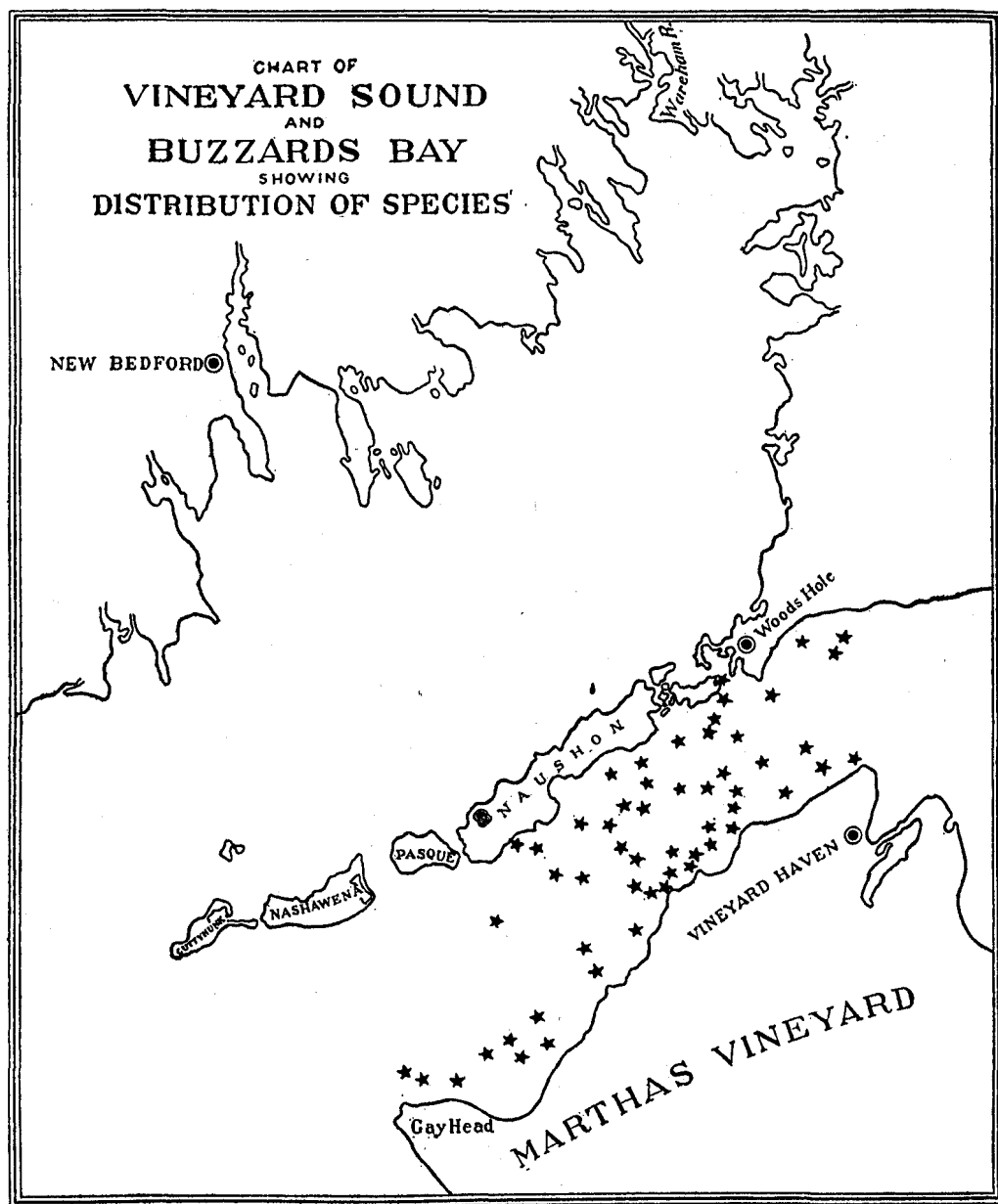


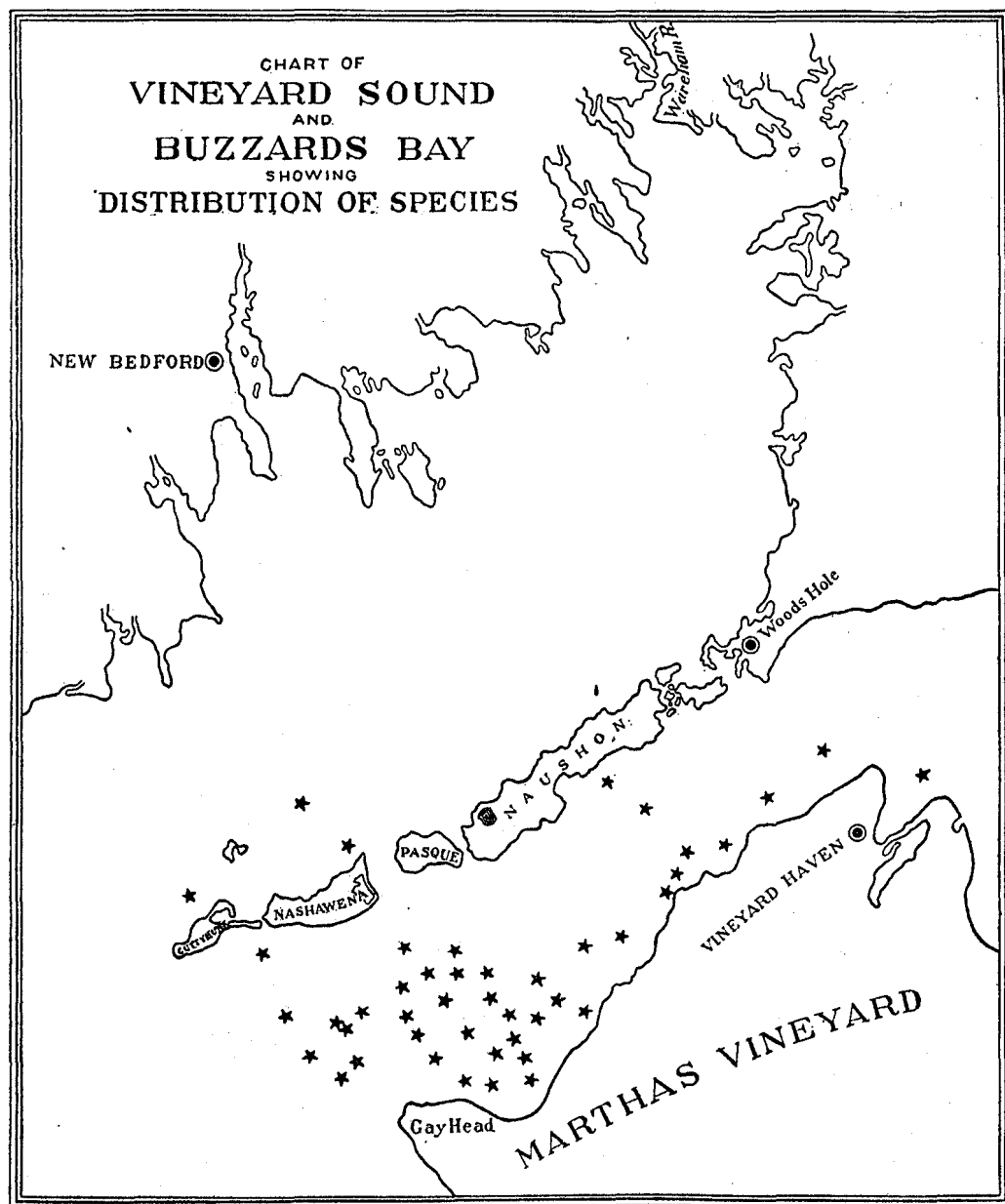
CHART 193.—*Perophora viridis*.

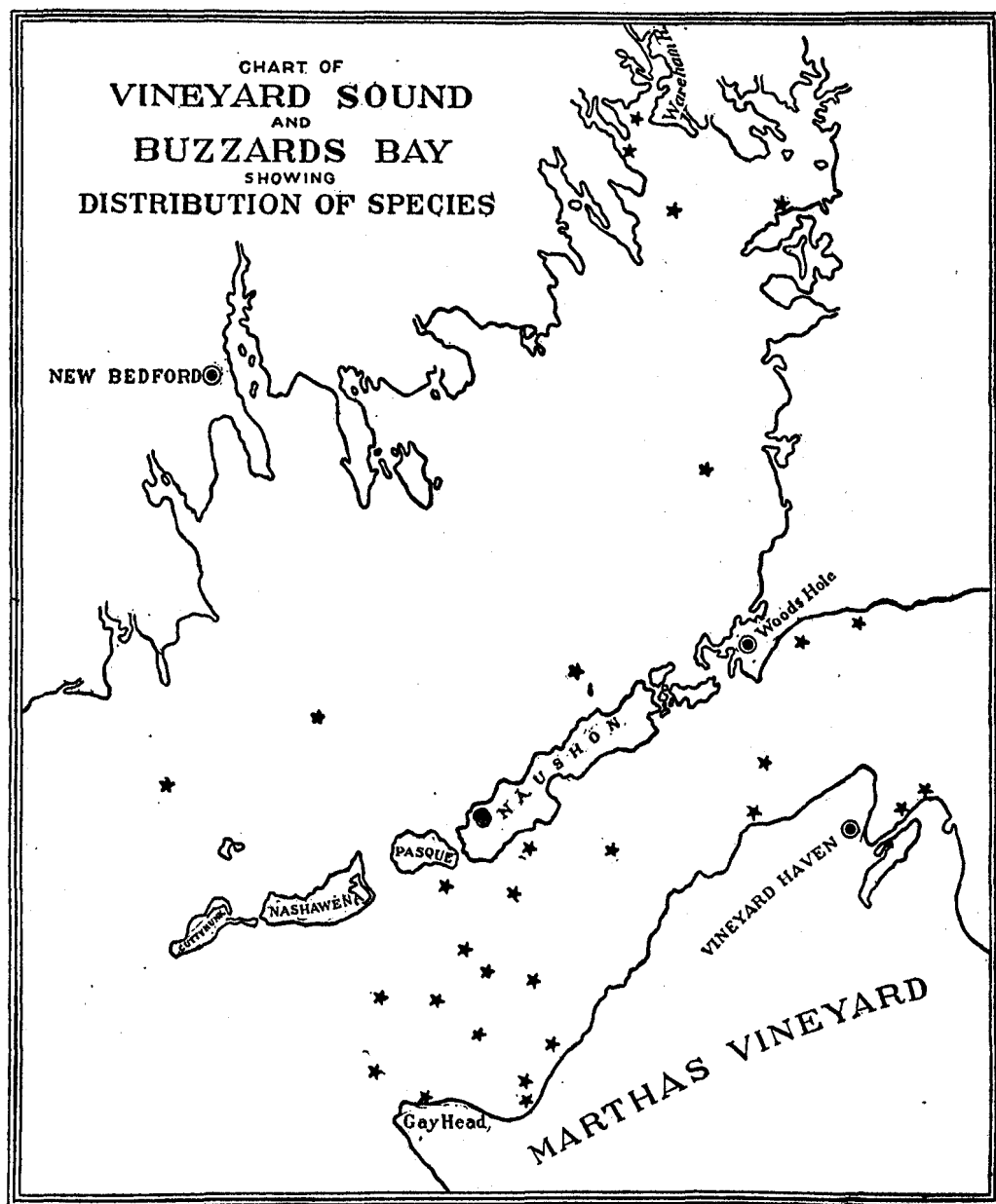
CHART 194.—*Didemnum lularium*.

CHART 195.—*Amaroucium pellucidum*.

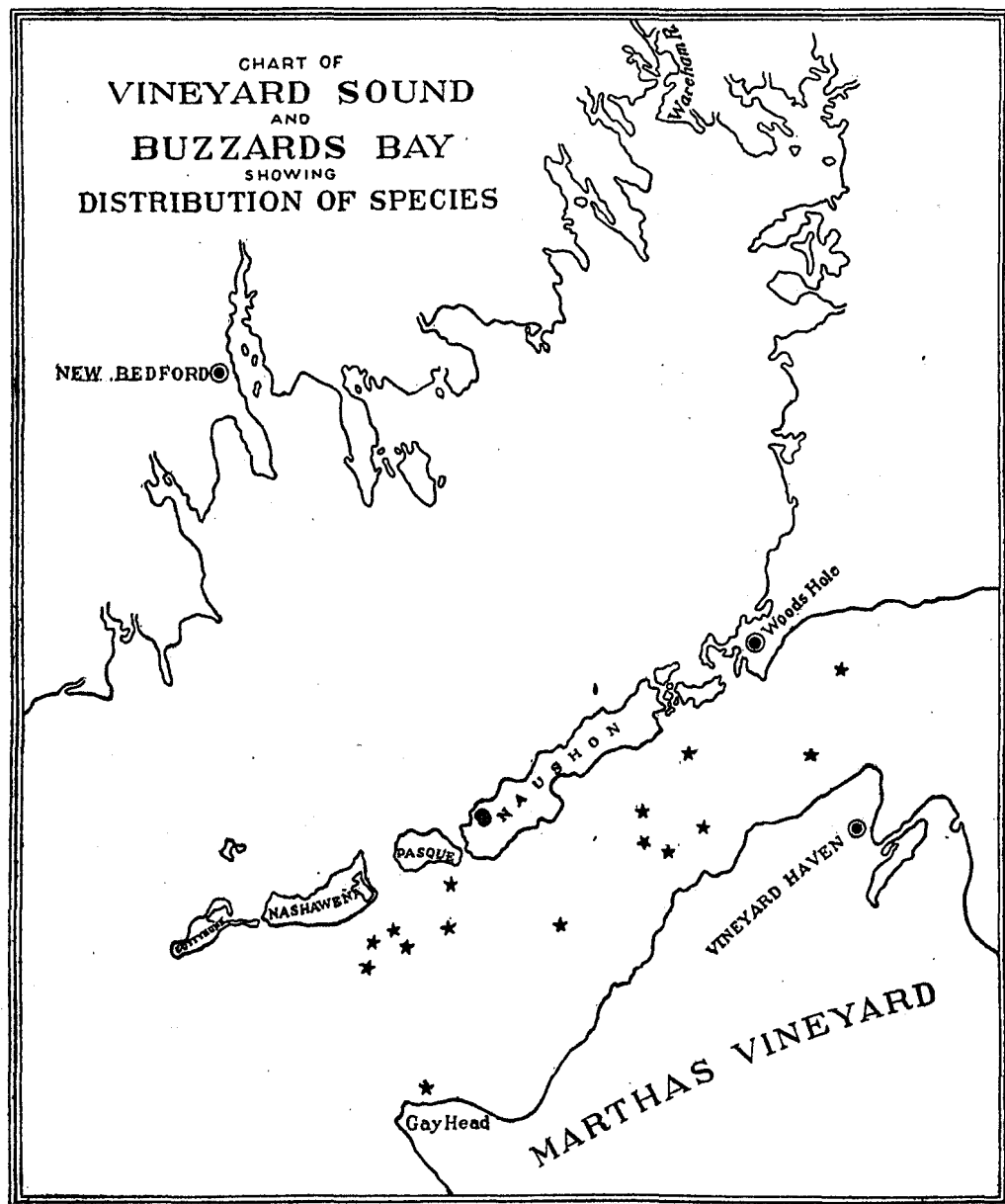
CHART 196.—*Amaroucium pellucidum constellatum*.

CHART 197.—*Amaroucium stellatum*.

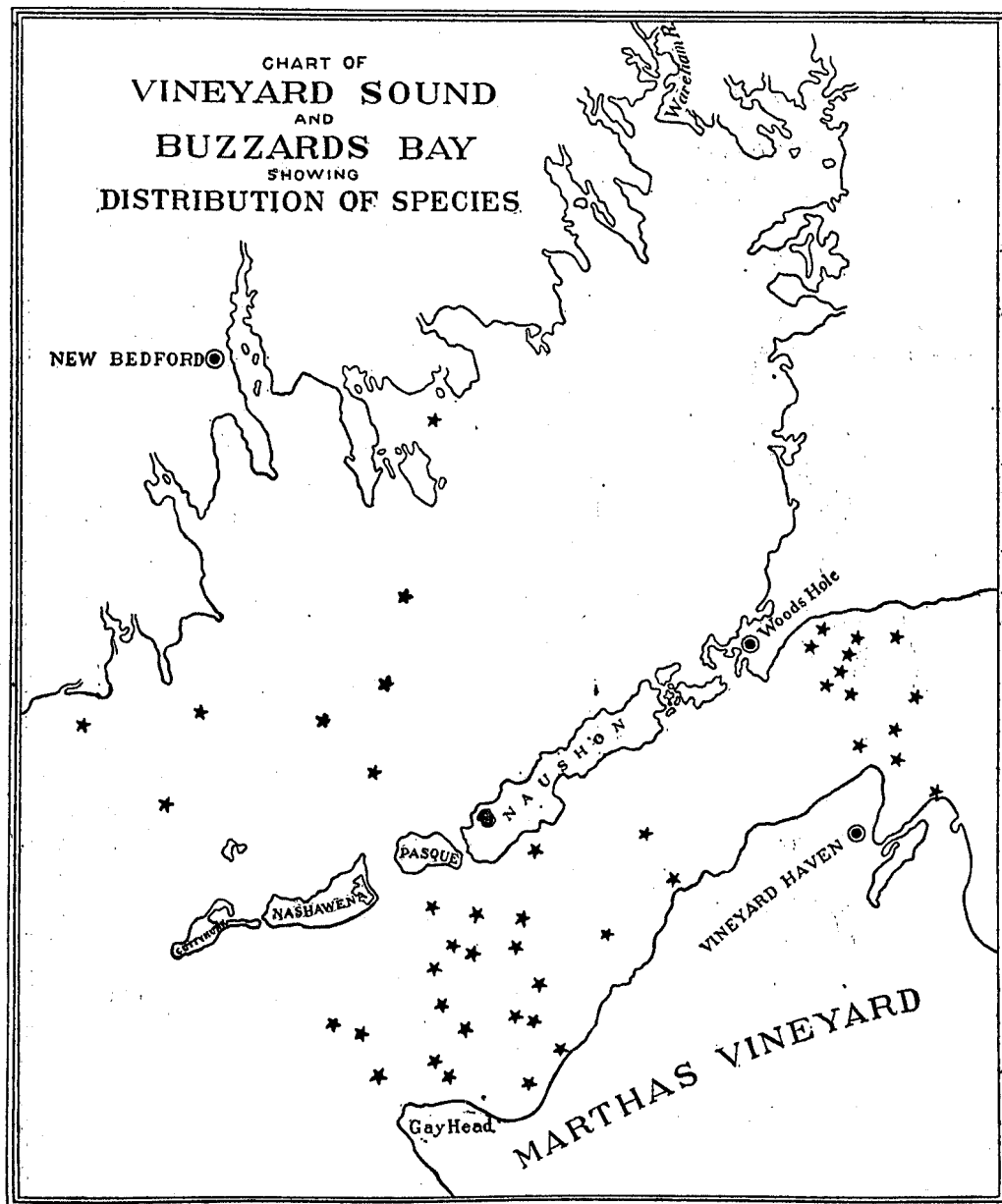
CHART 198.—*Raja erinacea*.

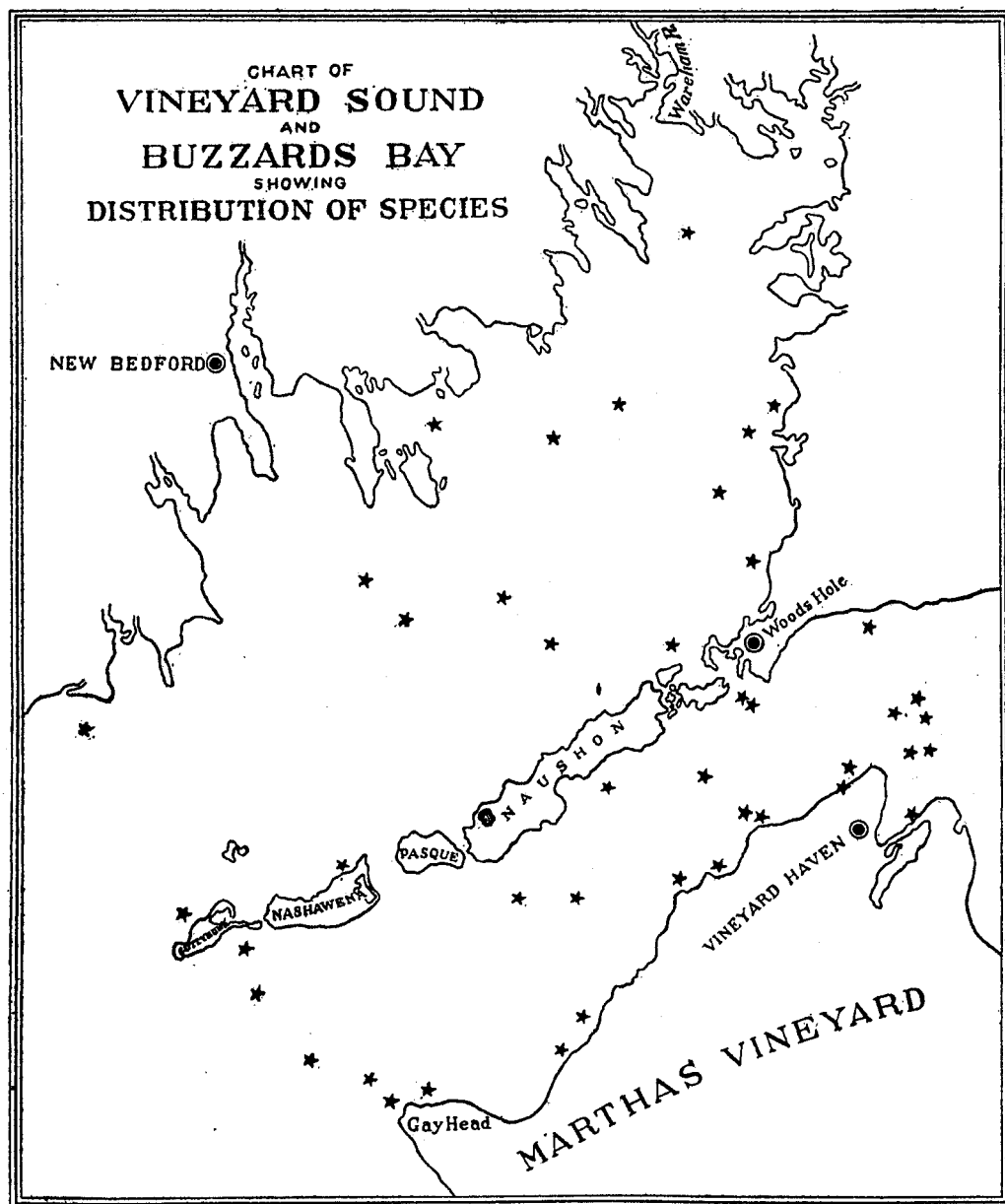
CHART 199.—*Syngnathus fuscus*.

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CHART 200.—*Ammodytes americanus*.



CHART 201.—*Stenotomus chrysops*.

CHART 202.—*Tautoglabrus adspersus*.

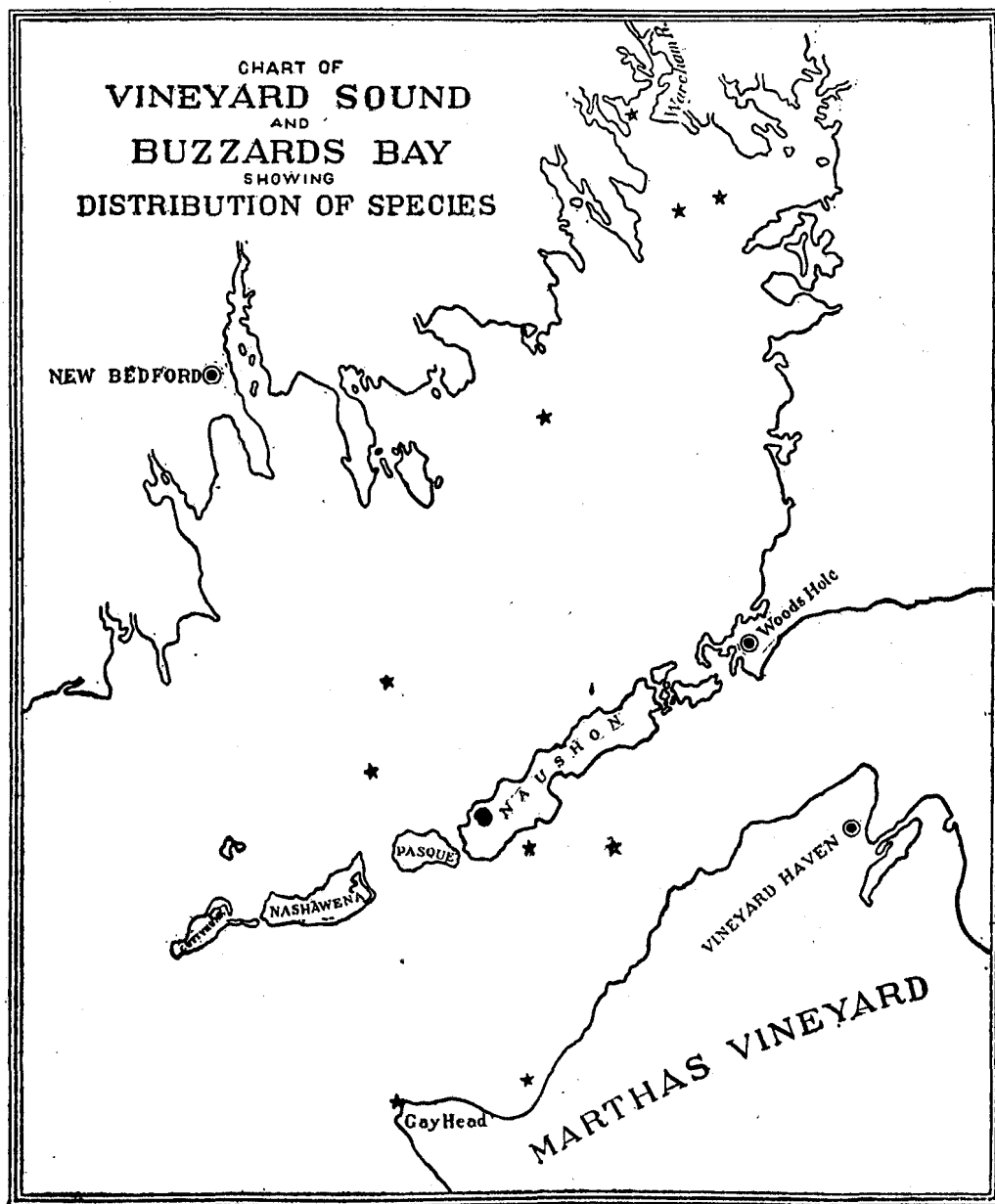
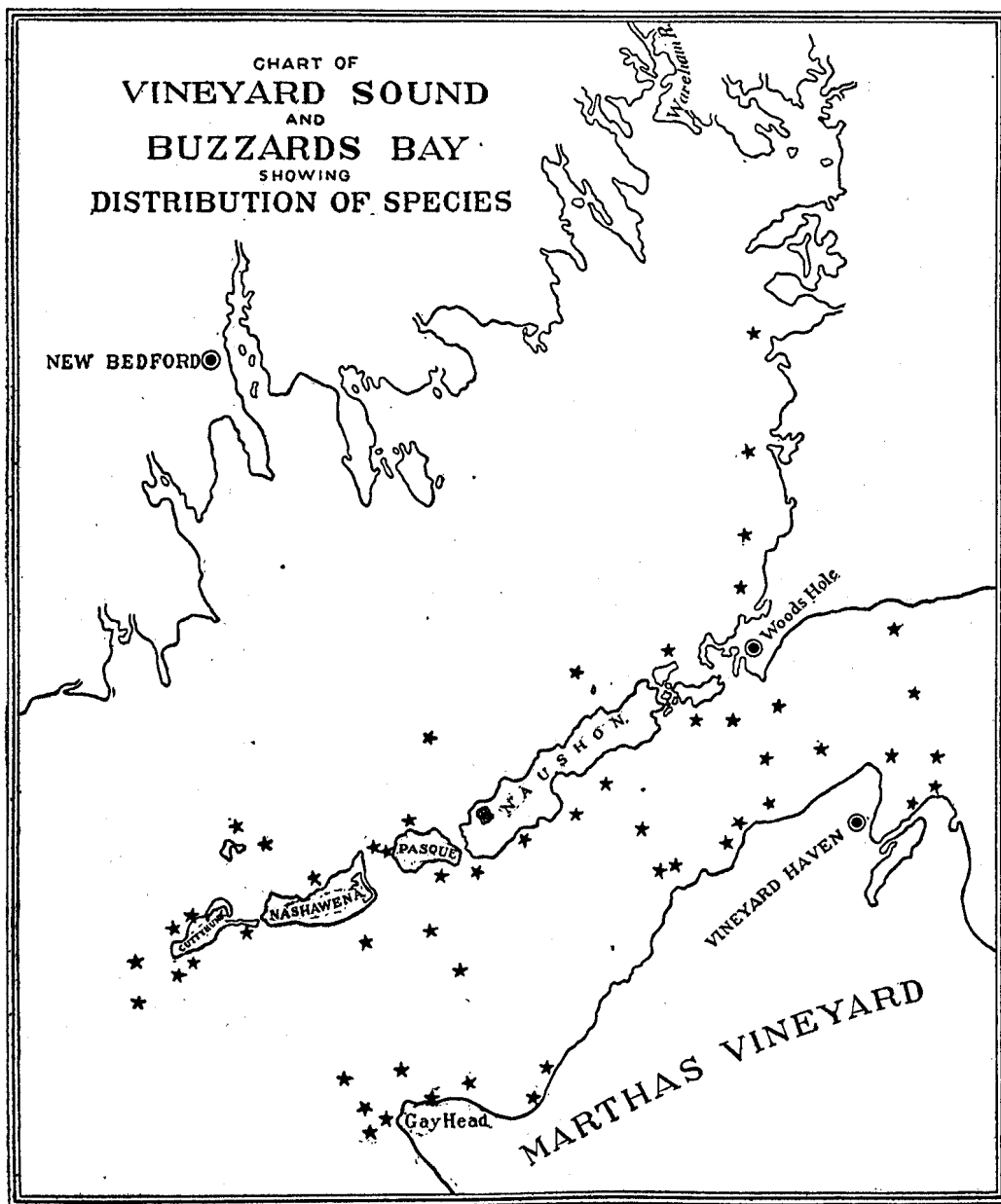
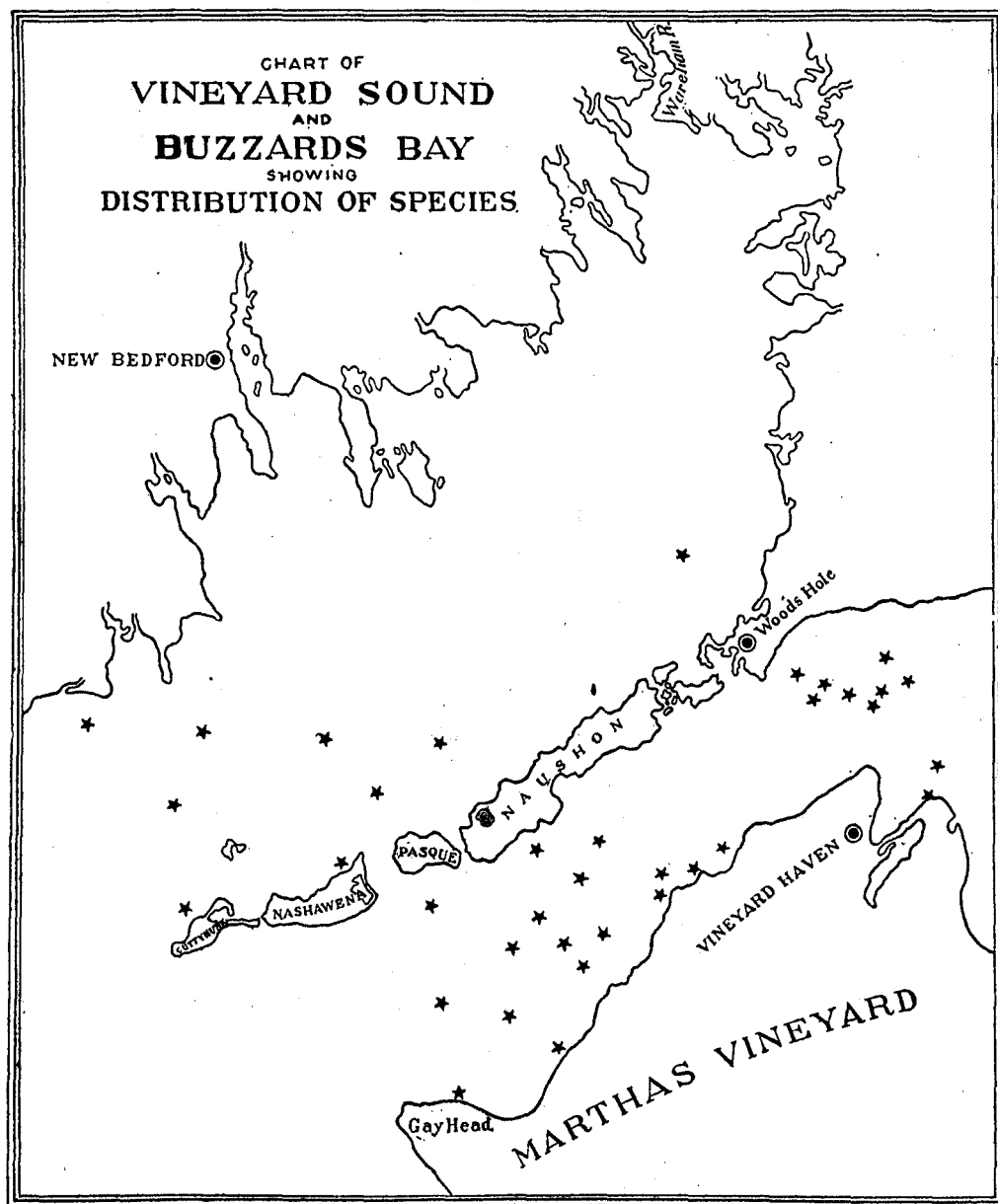
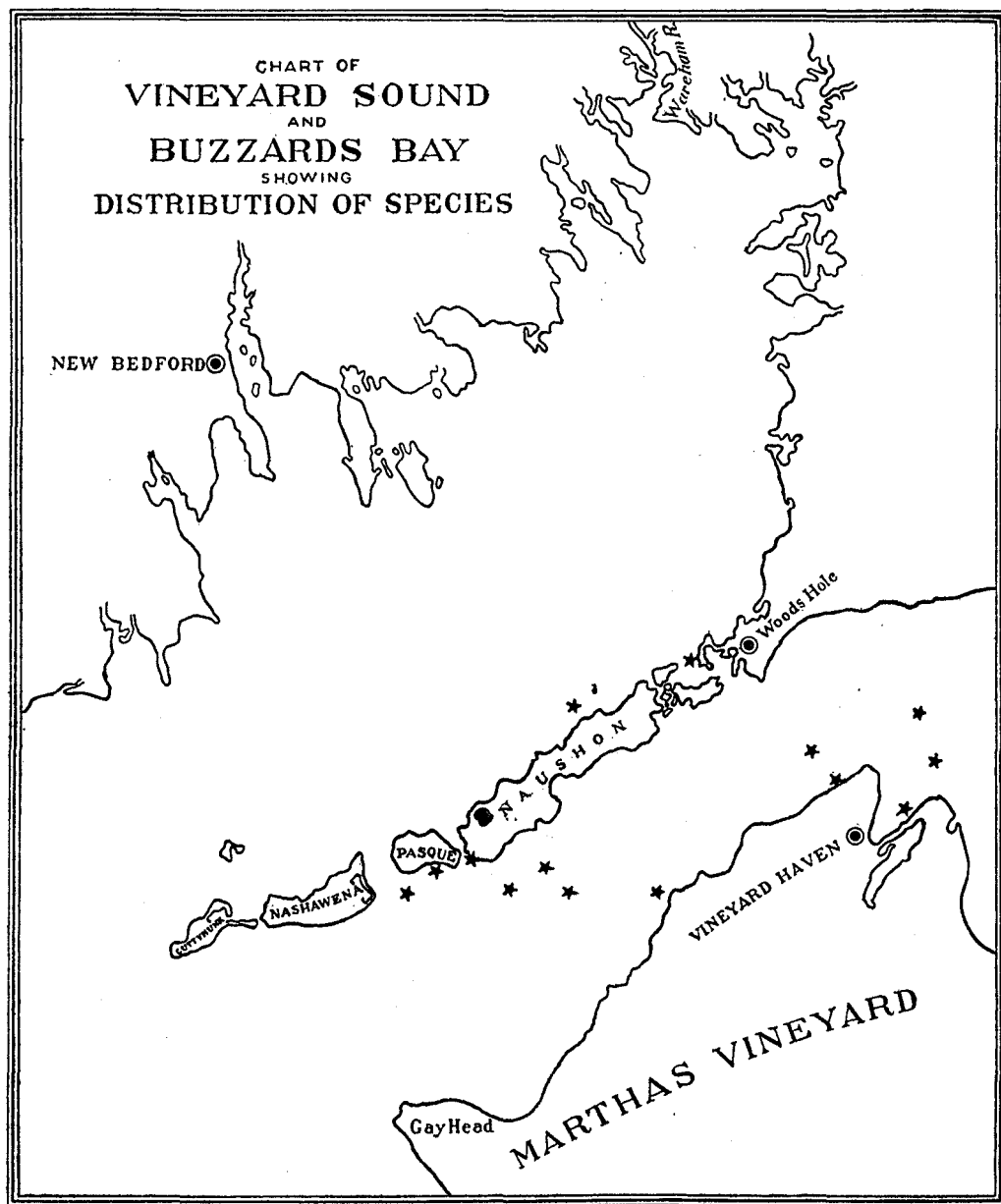
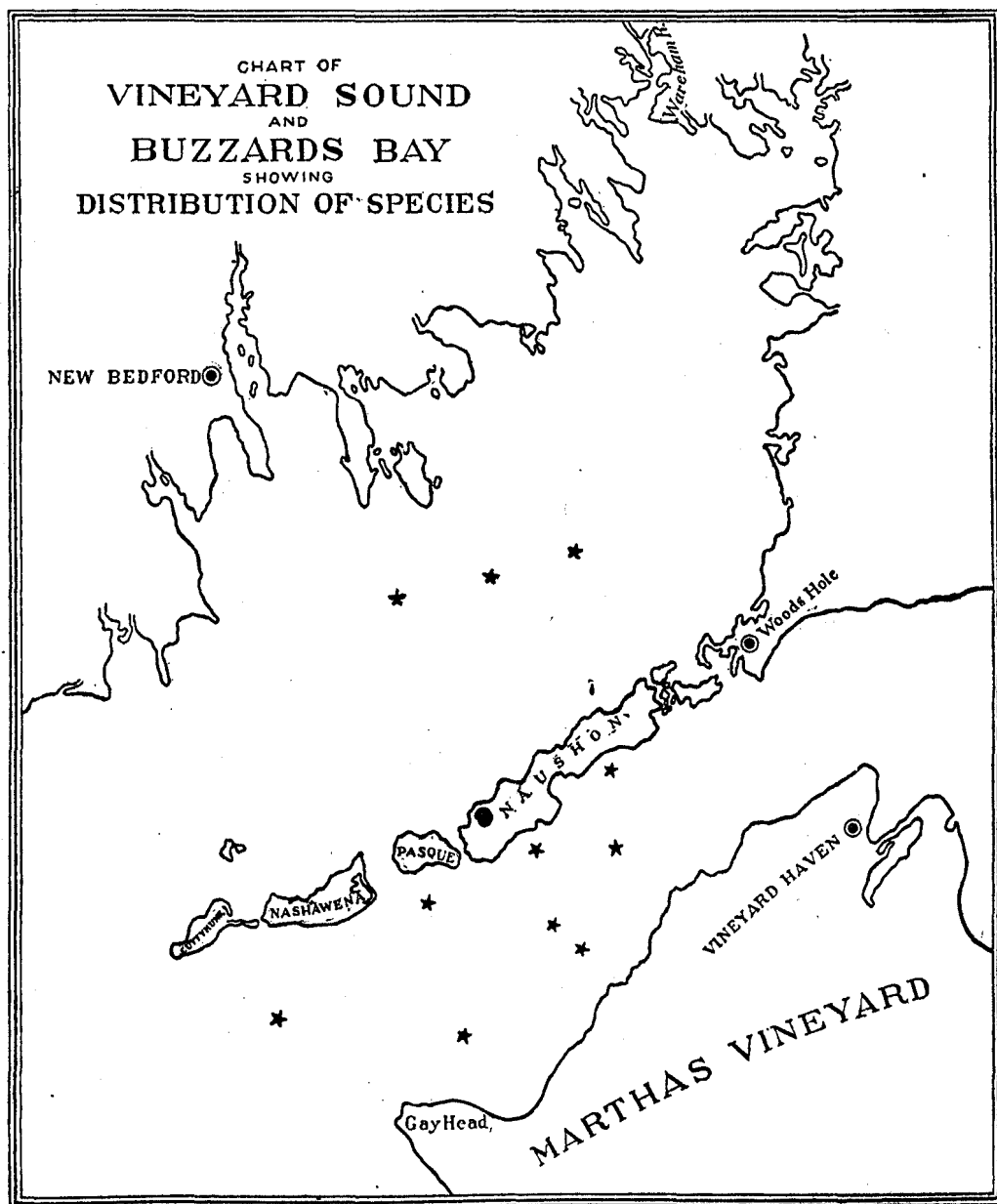


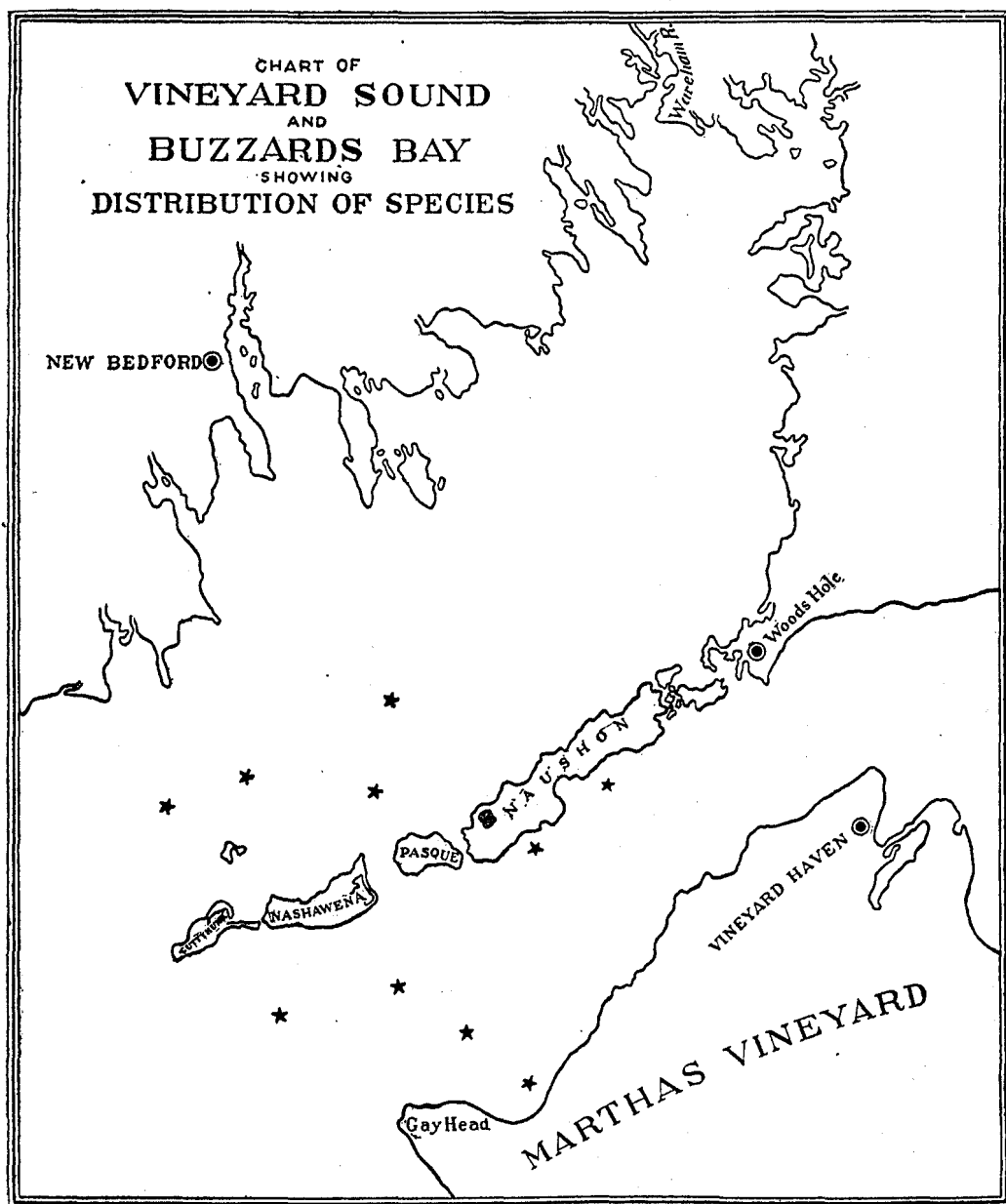
CHART 203.—*Spheroides maculatus*.

CHART 204.—*Myoxocephalus æneus*.

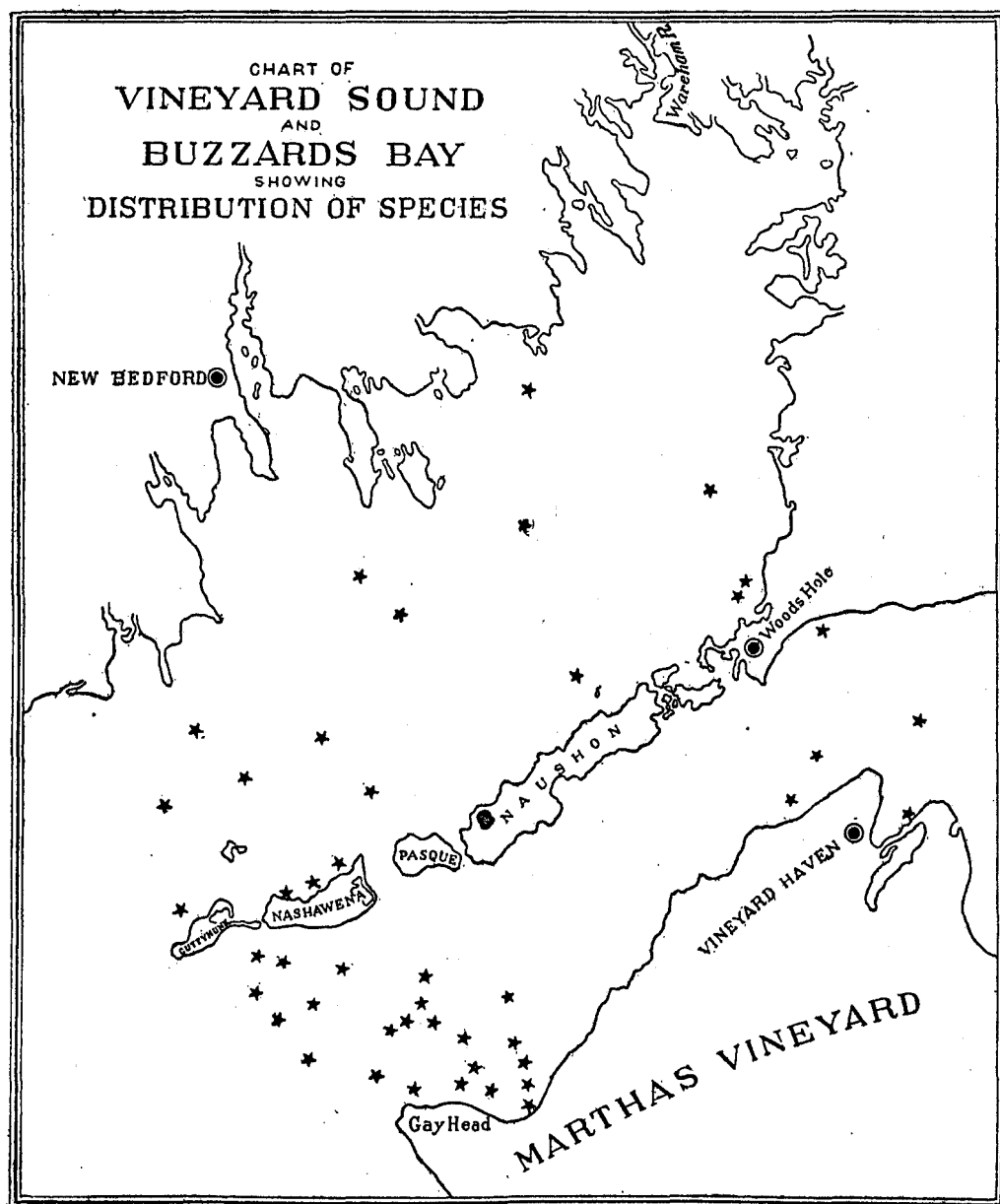
CHART 205.—*Prionotus carolinus*.

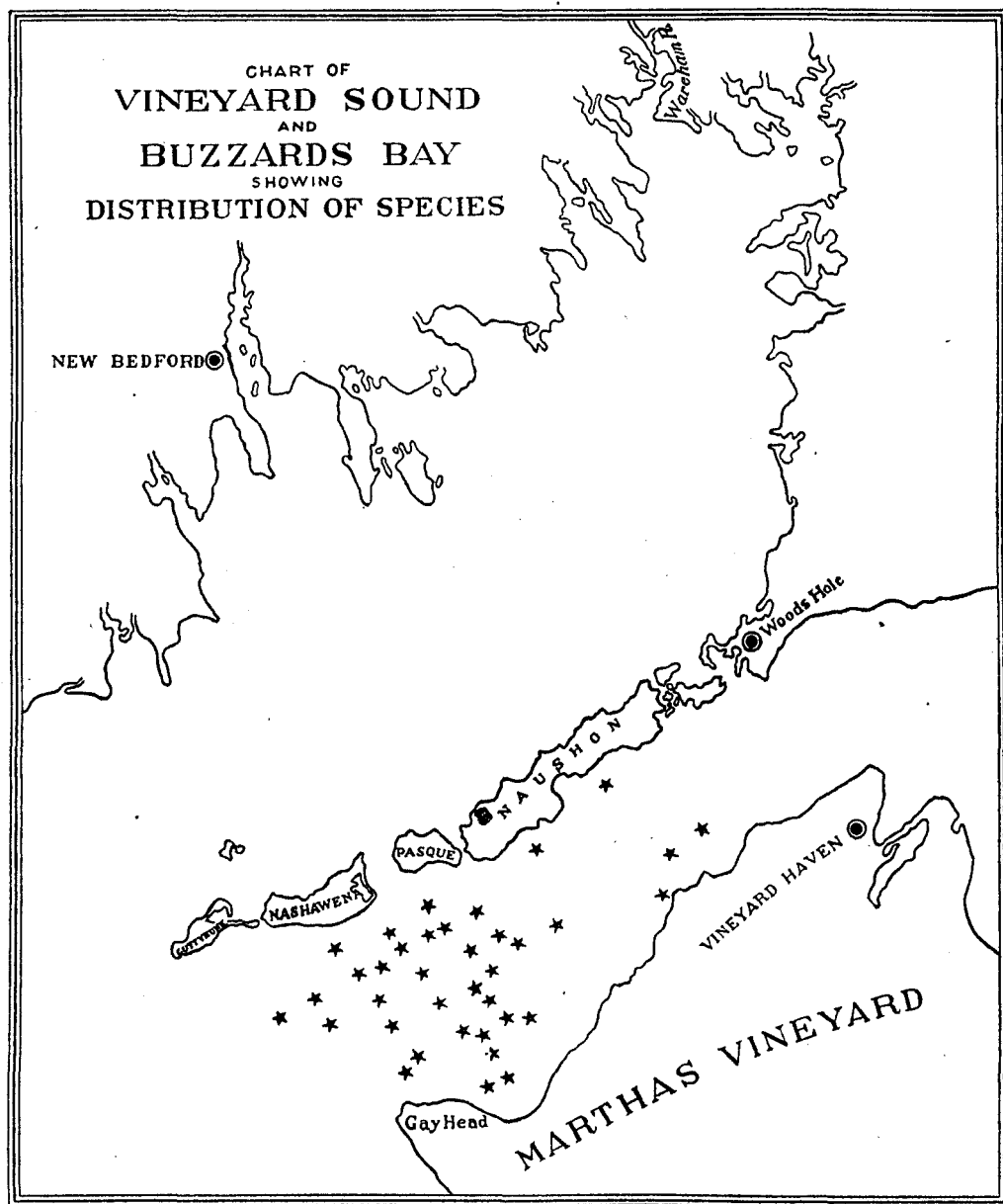
CHART 206.—*Pholis gunellus*.

CHART 207.—*Paralichthys dentatus*.

CHART 208.—*Paralichthys oblongus*.



CHART 209.—*Pseudopleuronectes americanus*.

CHART 210.—*Lophopsetta maculata*.







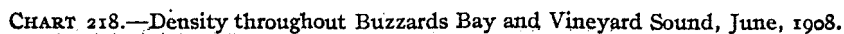














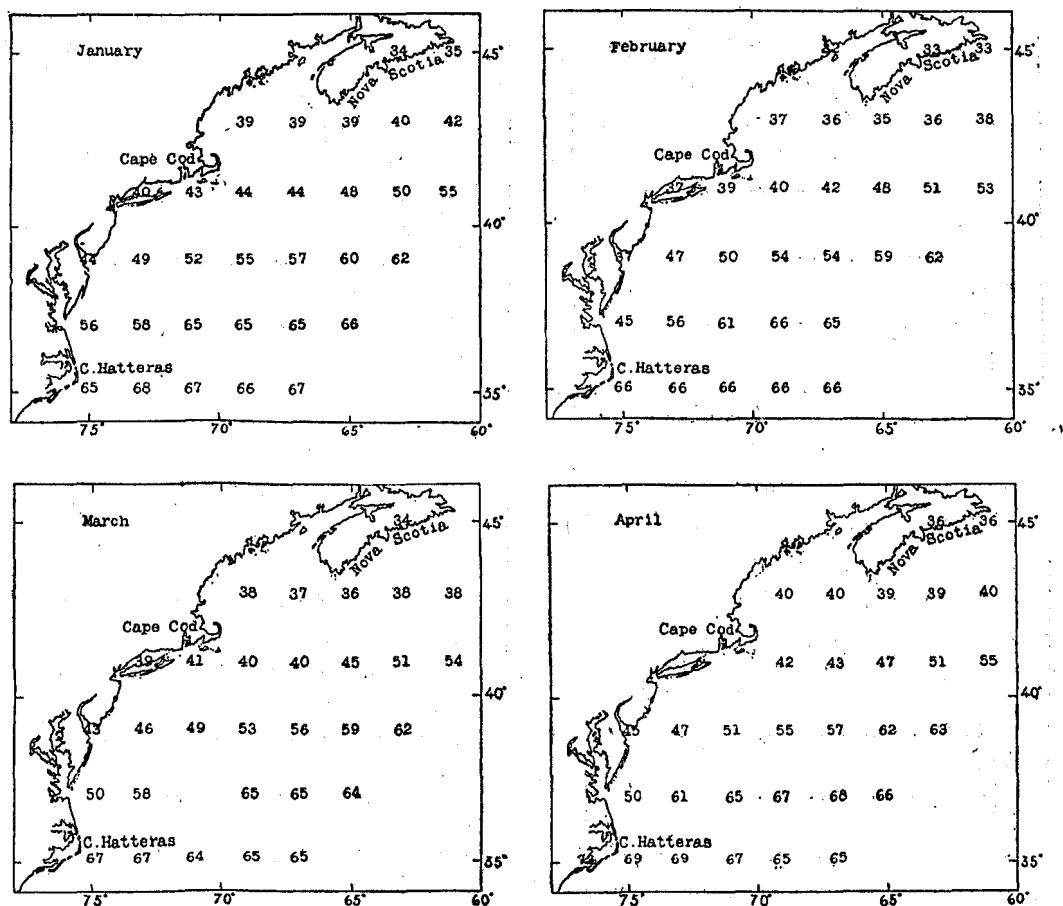


CHART 220.—Surface temperatures, northwestern Atlantic Ocean, during January, February, March, and April. (Furnished by Hydrographic Office, United States Navy Department, from compilation of British Meteorological Office.)

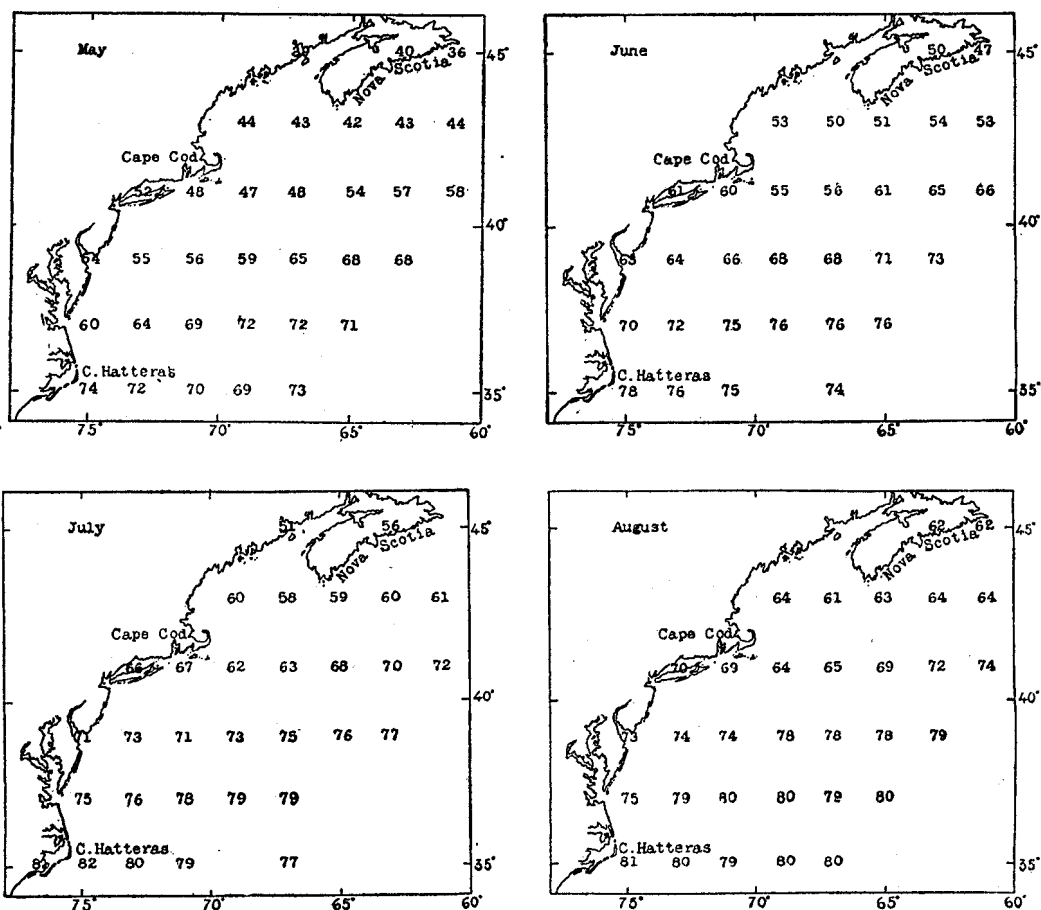


CHART 221.—Surface temperatures, northwestern Atlantic Ocean, during May, June, July, and August. (Furnished by Hydrographic Office, United States Navy Department, from compilation of British Meteorological Office.)

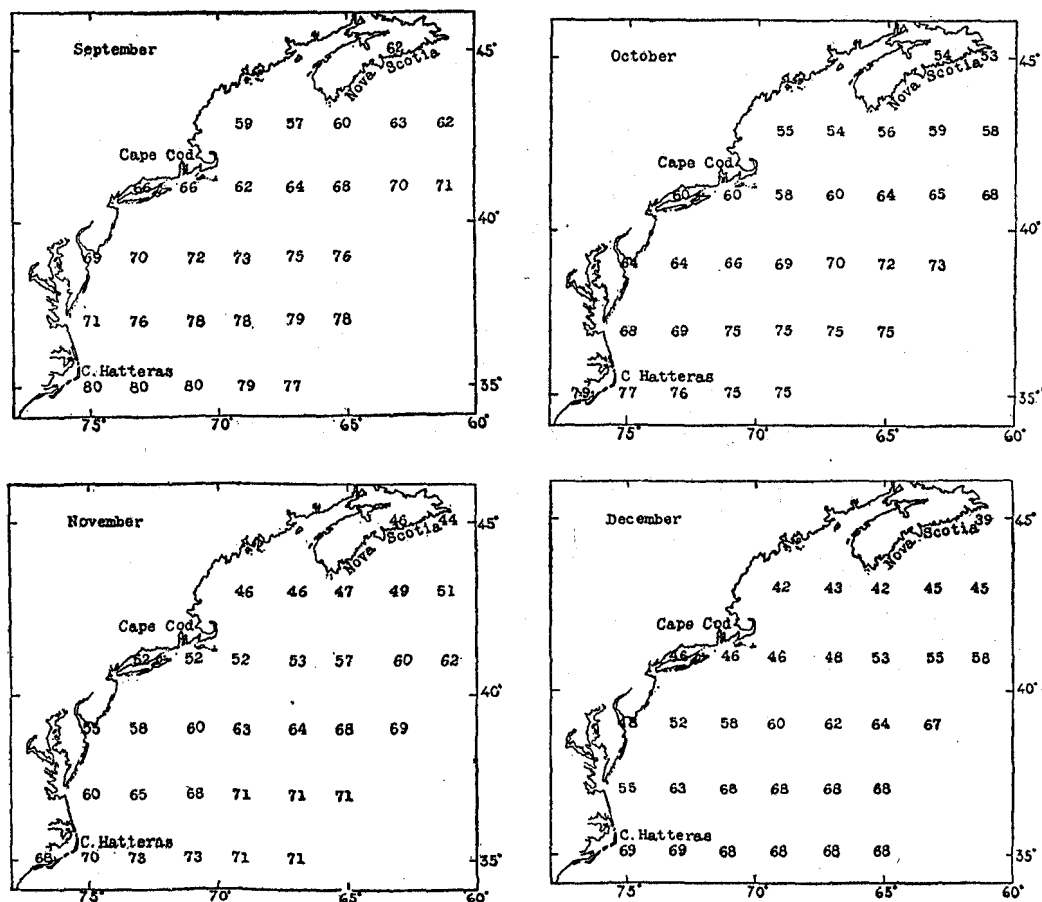


CHART 222.—Surface temperatures, northwestern Atlantic Ocean, during September, October, November, and December. (Furnished by Hydrographic Office, United States Navy Department, from compilation of British Meteorological Office.)

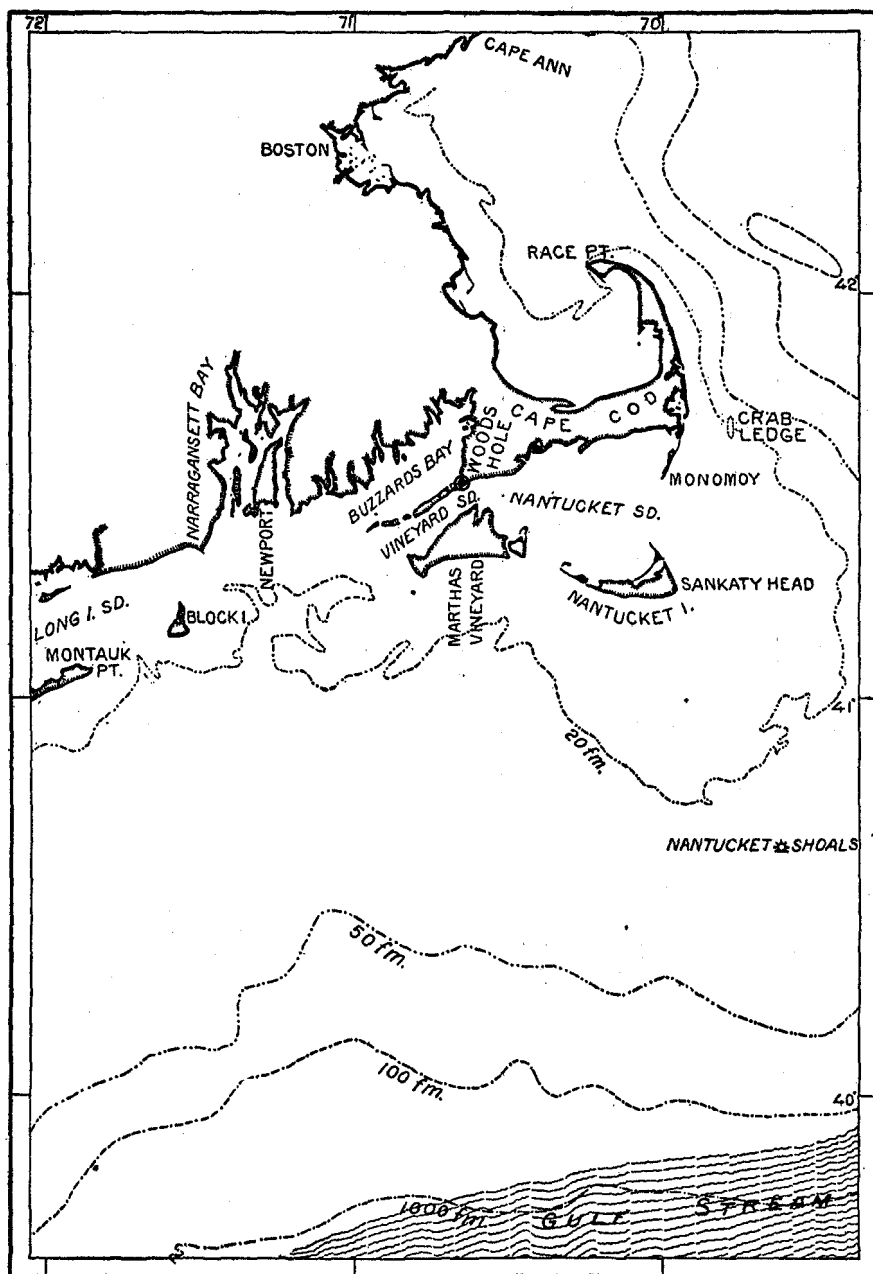


CHART 223.—Cape Cod and neighboring areas of land and water, showing geographic and hydrographic features. (Based in part on U. S. Coast and Geodetic Survey chart no. 1000.)

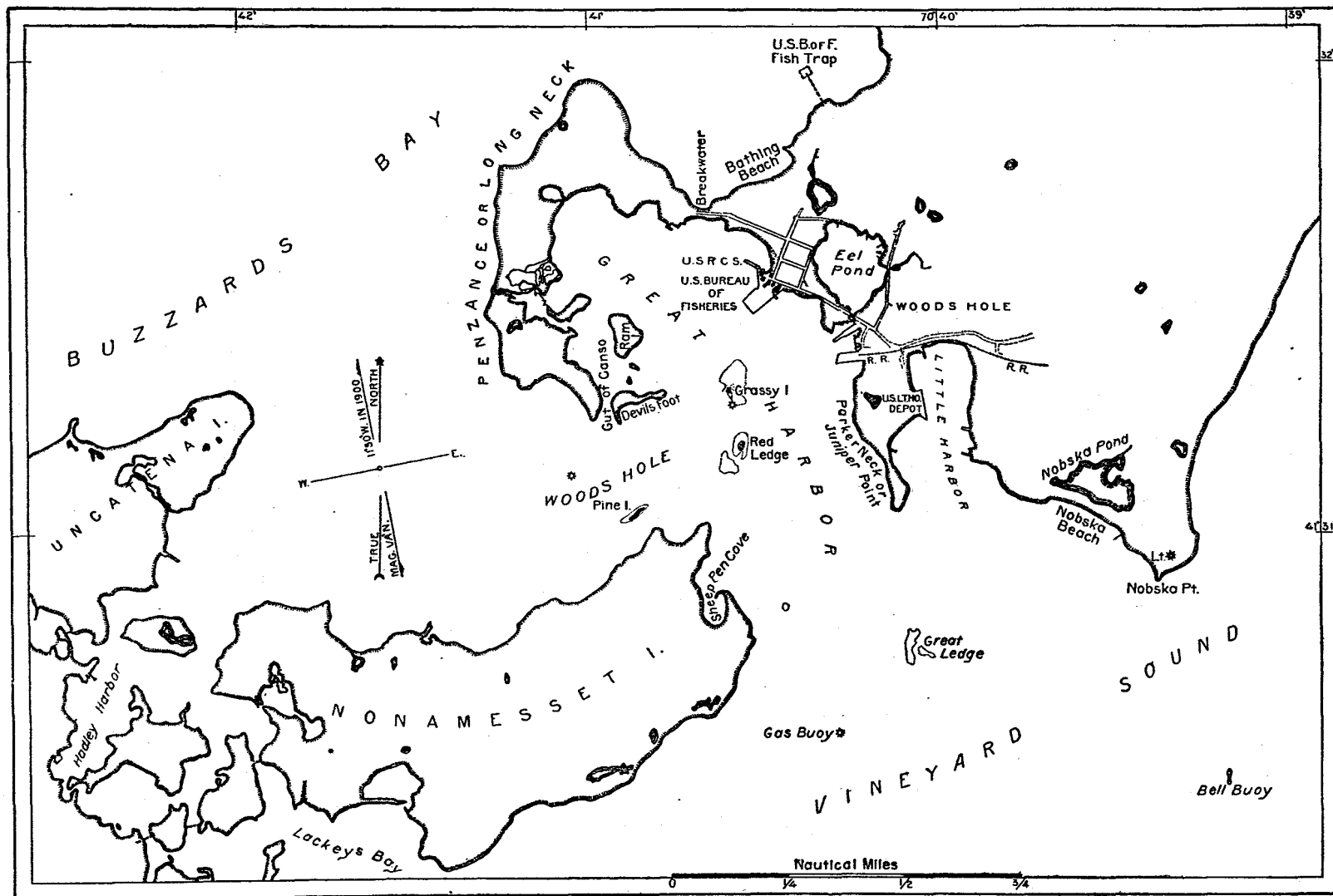
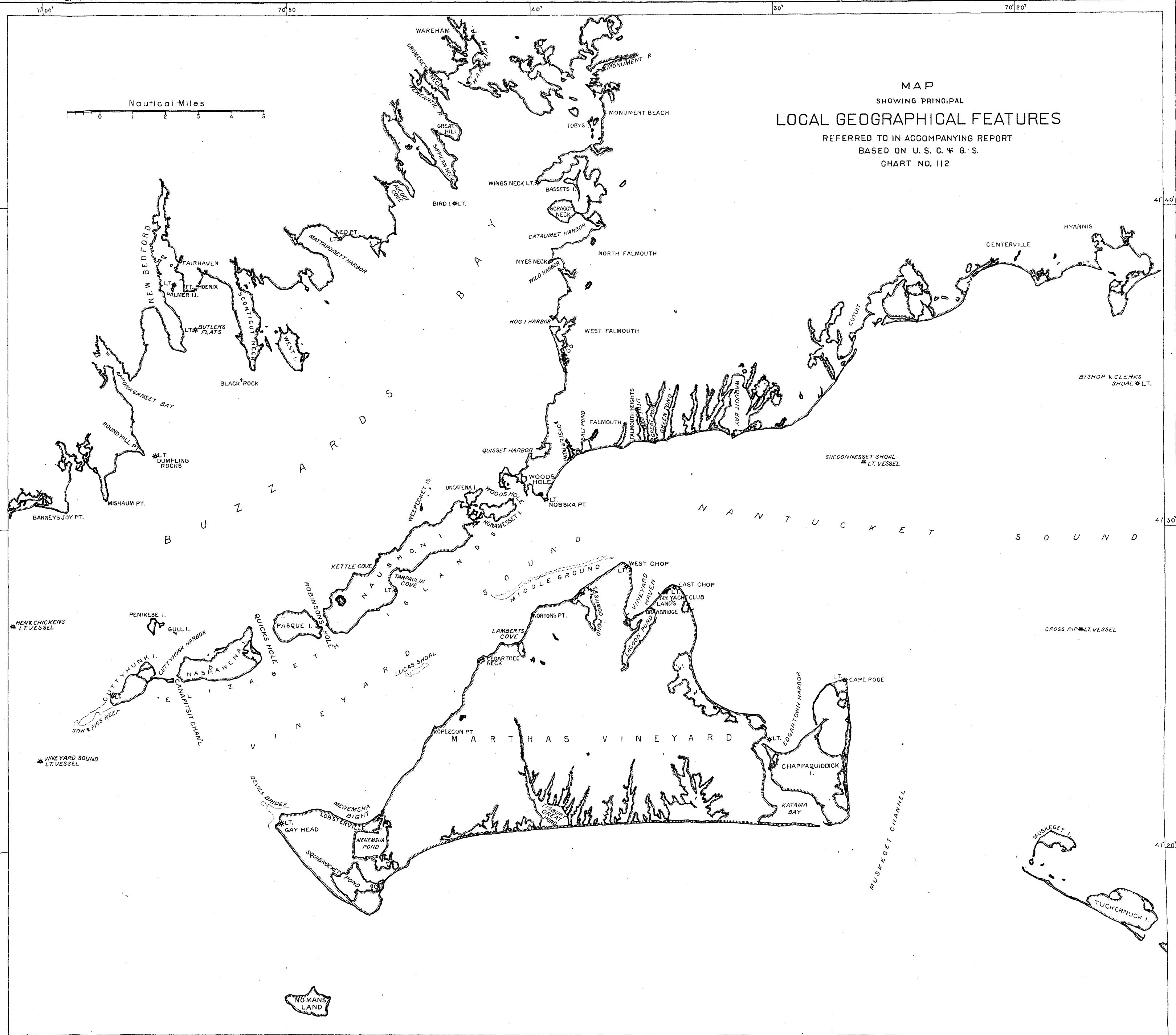


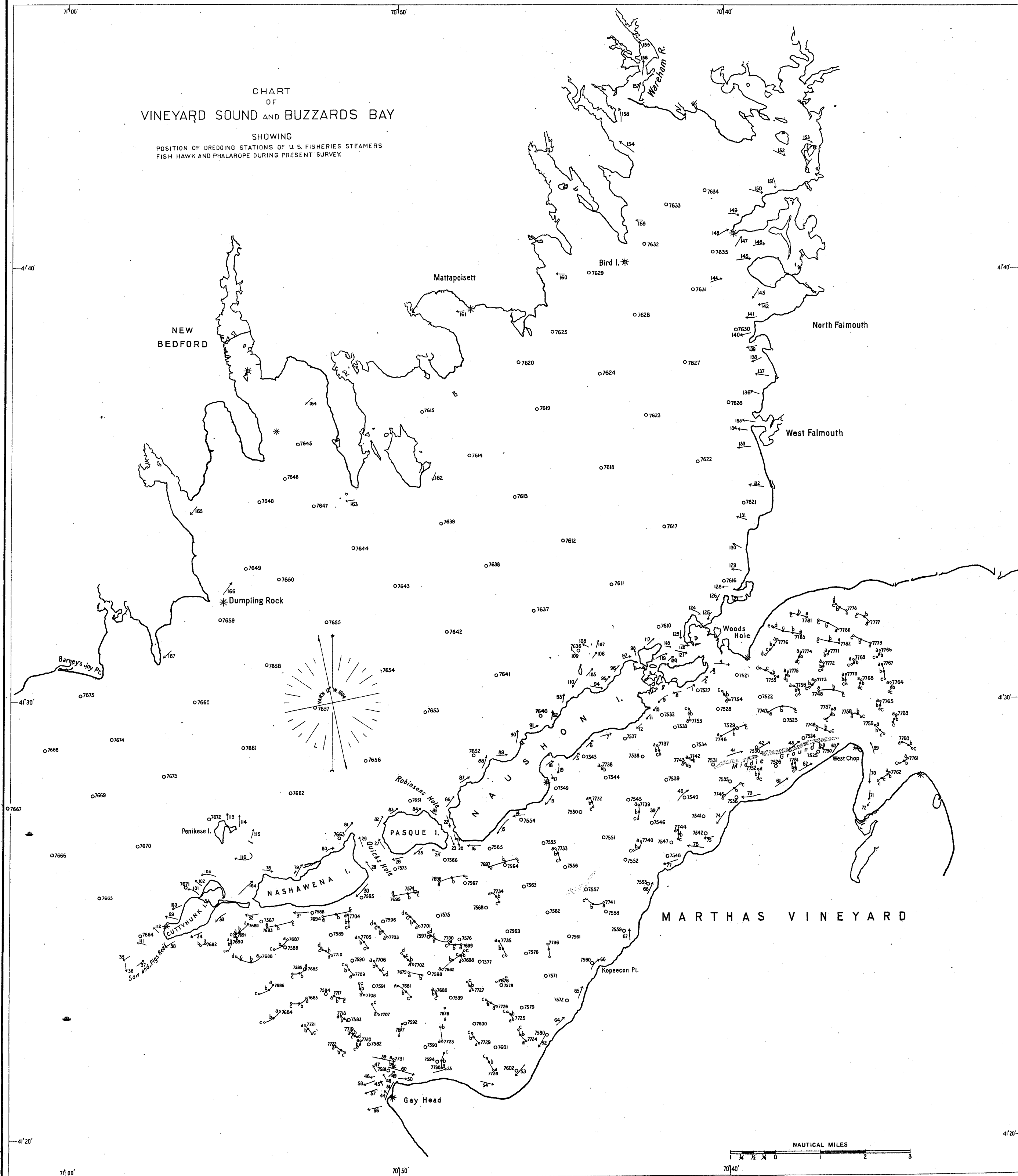
CHART 224.—Woods Hole Harbor and vicinity. (Based on U. S. Coast and Geodetic Survey chart no. 348.)





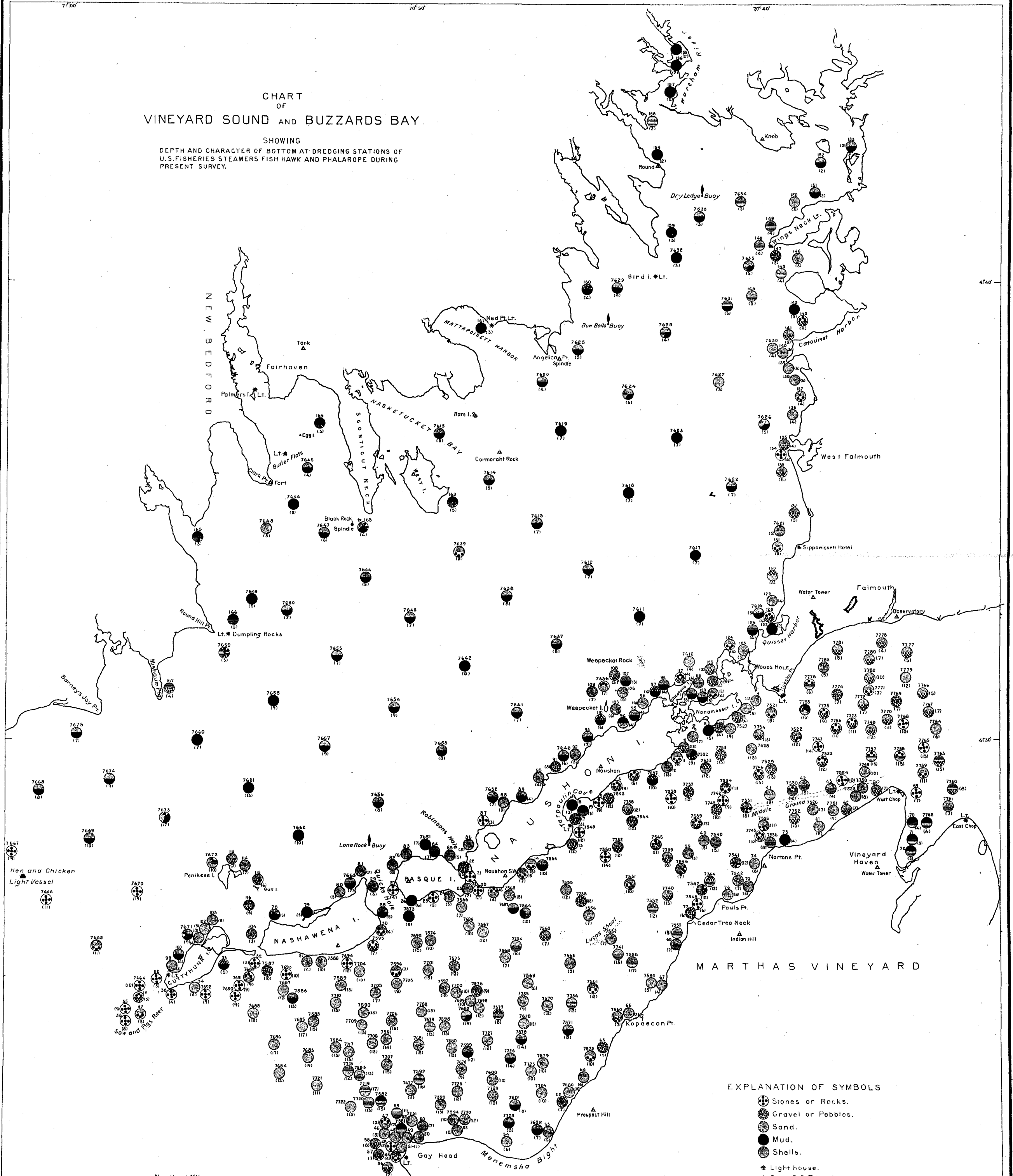


SHOWING  
POSITION OF DREDGING STATIONS OF U. S. FISHERIES STEAMERS  
FISH HAWK AND PHALAROPE DURING PRESENT SURVEY.



# CHART OF VINEYARD SOUND AND BUZZARDS BAY.

SHOWING  
DEPTH AND CHARACTER OF BOTTOM AT DREDGING STATIONS OF  
U. S. FISHERIES STEAMERS FISH HAWK AND PHALAROPE DURING  
PRESENT SURVEY.



## EXPLANATION OF SYMBOLS

- ⊕ Stones or Rocks.
- ⊙ Gravel or Pebbles.
- ⊙ Sand.
- ⊙ Mud.
- ⊙ Shells.
- \* Light house.
- △ Can. G. S. Triangulation station.

Depth in fathoms at each station indicated by the number in parenthesis.